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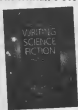
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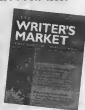
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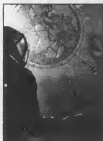
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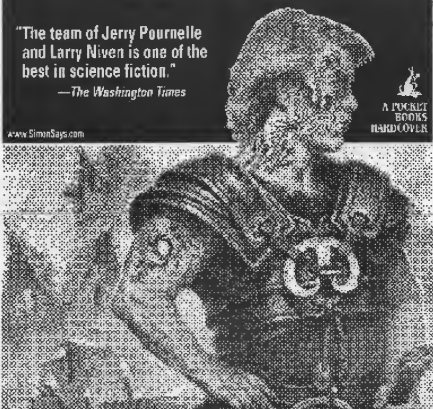
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A POCKET
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HARDCOVER



AND YOU WERE WORRIED ABOUT Y2K?

I read all sorts of odd things in the course of the year, casting my net far and wide for curious scraps of information that might be morphed into some datum of life on Majipoor or perhaps transformed into a column in this magazine. And so it happened that I found myself reading *Island of Bali*, a classic anthropological study by the Mexican artist and ethnographer Miguel Covarrubias; and it was this charming and comprehensive account of life on the Indonesian isle of Bali seventy years ago that put me on to the marvelous intricacies of the Balinese calendar—a mind-boggling system that would test any computer programmer to his very limits.

Bali uses, along with the Christian one that has established itself everywhere as the world's basic system of reckoning time, *two* indigenous calendars, actually, running in parallel. Their basic calendar, called the *saseh* calendar, is approximately like ours, but because it is based on lunar time rather than solar, it comes up short on days per year—354 to 356 instead of our 365.

The reason for the discrepancy is that the lunar year is built on lunar months (the interval between each new moon), which run twenty-nine or thirty days, whereas the solar year is based on the time (365 days, or intervals between each sunrise) that it takes the Earth to complete one revolution around the sun. Twelve lunar months won't add up to a year of 365 solar days. Twelve solar months of thirty days won't do it either, falling short by five days.

Therefore our solar calendar has

seven thirty-one-day months, which makes up that five-day deficit and also accounts for February's deplorable two-day shortfall. (Even at that, we don't have a perfect solar calendar, which necessitates the 366-day Leap Year every four years and other little adjustments at greater intervals.)

On Bali, and on the neighboring island of Java, the twelve-month *saseh* calendar creates an even bigger annual deficit of days because the interval between one new moon and the next is too short to permit thirty-one-day months or even a whole year of thirty-day ones. So the *saseh* calendar skips one day out of every sixty-three (nine weeks of seven days each) to create a varying number of twenty-nine-day months, thus leaving the *saseh* year nine to eleven days short of the solar one, and copes with this deficit in a cumulative way by sticking in a full extra month, the *saseh nampeh*, every two and a half years. The whole system revolves around the great national holiday called *nyepi*, which falls on the first day of the ninth month and nevertheless is regarded as the beginning of the new year. (Don't ask!) On *nyepi* the whole island shuts down for religious devotions: absolute stillness is observed, no work done, no driving, no fires lit; even the electrical system is shut down.

Following the convolutions of the *saseh* calendar is no easy task. But wait! The fun is just about to begin! There's also the other Balinese calendar, the *wuku*. And the *wuku* is a lulu.

Put this in your computer and parse it:

The *wuku* year has just 210 days, and therefore bears no relationship either to solar time or lunar time. It isn't divided into months at all, merely into weeks. And determining the number of weeks per *wuku* year depends entirely on which of the *ten* different simultaneous systems of *wuku* weeks you have in mind.

The basic week has seven days, so this part of the *wuku* has a thirty-week year. The seven days of this calendar are named for the major heavenly bodies, and it is interesting to see that the order (derived from the ancient Sanskrit calendar of India) is basically identical to the one we use, thereby demonstrating the primordial antiquity of the seven-day Indo-European calendar. *Redite* is Sunday, the day of the Sun; Monday is *soma*, the day of the Moon; Tuesday, *angara*, is Mars's day; *budda*, Wednesday, is that of Mercury; *wrespati*, Thursday, is the day of Jupiter; Friday, *sukra*, is for Venus; and *sanistjara*, Saturday, is Saturn's day. (The English-language calendar, which is partly derived from Germanic antecedents, slips in a few variations. "Tuesday" is *Tiw's* day, *Tiw* being an ancient Teutonic god of war; but the link to Mars can still be seen in the French "mardi," the Italian "martedì," and so forth. "Wednesday" is *Wotan's* day for us, but Mercury still stakes his claim in the "mercredi," "miercoles," and "mercoledì" of French, Spanish, and Italian. And it is Thor who rules Thursday for us, but Jupiter—Jove—is still in charge of Italian's "giovedì" and French's "jeudi.")

A seven-day, thirty-week, 210-day calendar would be hard enough to work with in a world where the true year is actually slightly more than 365 days long. But the Balinese divide the *wuku* year into nine other kinds of weeks as well.

GARDNER DOZOIS

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My favorite of these is the week called *ekowara*, which is one day long, the name of that one day being *luang*. You can readily see that the *wuku* year contains 210 *ekowara* weeks, and you can wish everybody a happy *luang* every day of the year.

But there's also *duwiwara*, the two-day week, 105 of them a year, the days being named *m'ga* and *p'pat*. There's *triwara*, the three-day week, containing *paseh*, *beteng*, and *kadjeng*, and coming around seventy times per year. There's *tjaturwara*, the four-day week, and *pantjawara*, the five-day week, and so on up to *dasawara*, the ten-day week, twenty-one of them to a year. (And here again note the Sanskrit ancestry of those numerical prefixes: *du*, *tri*, *tja*, *pant*, for two, three, four, five, etc.)

The lovely thing about the *wuku* calendar is that all these weeks run at the same time. Therefore a day can be the day *redite* of the seven-day week and it also will be, of course, *luang* of the one-day calendar, and, perhaps, *m'ga* of the two-day week and the day *paseh* in the three-day week, and up and up in dizzying progression, maybe *ogan* in nine-day reckoning and *suka* in the ten-day week. The combinations and permutations are, if not exactly infinite, certainly multitudinous.

Imagine, if you will, trying to program a Balinese computer to handle the ten simultaneous weeks of the *wuku* year. It can be done, of course. No doubt it *has* been done. But what a headache!

And what, you quite reasonably ask, is the purpose of such a mind-numbing calendrical system?

The calculation of propitious days for religious ceremonies or important personal activities seems to be what it's all about. For instance, the important Balinese holiday *galungan*, when one's cremated ancestors visit the temples to receive offerings

from their descendants, occurs in the week *dunggulan* of the thirty-week *wuku* calendar, but only on that day when the day *klion* of the five-day week coincides with the day *budda* of the seven-day week. A little arithmetic shows that *budda* (the name has nothing to do with Buddha, by the way) and *klion* are going to be in conjunction every thirty-five days, but only one of those meetings is going to occur in *dunggulan* each year, and that day is the holiday.

Then there's the conjunction of *kadjeng* of the three-day calendar and *klion* of the five-day calendar: a good day for propitiating evil spirits, coming around every fifteen days. Every thirty-five days *klion* will overlap the day *sanistjara* of the seven-day calendar, and that day, which is known as *tumpak*, is an extremely lucky one. One needs to watch out for the day *kala* of the eight-day week, which can be quite unlucky. And so on and so on and so on.

I am, you should know, only barely scratching the surface here. I have said nothing about the twelve seasons of the year (the season of blossoming wildflowers, the season of mending dikes, the season of sowing rice, etc., etc., etc.) nor of the division of the lunar year into four *na-gas*, or serpents, nor of the various *windu* cycles of eight, twelve, twenty, and thirty-two years, nor of the various annual six-day *ingkel* periods, one of them being auspicious for bamboo, one for cattle, one for fish. . . .

How does the average Balinese, you may wonder, keep track of all this?

The answer is that the average Balinese doesn't even try. Mostly he uses the seven-day calendrical system, and is more or less aware of the ongoing five-day calendar too, since most of the important reli-

gious festivals are held at thirty-five-day intervals at specific conjunction-points of the two calendars. The three-day calendar stays in people's minds also, because it establishes when each village holds its market day. For more abstruse calculations, conjunctions of the six-day week and the nine-day week, let us say, as well as the other, greater cycles, he must go to the local priest, who is keeping track of the whole system on behalf of the entire community. As Miguel Covarrubias tells us, the Balinese calendrical system "is a science so complicated in itself that it is practiced mainly by specialists, generally the Brahmanic priests and witch-doctors." A nifty monopoly run by the initiates of the art, in other words.

The priests, for all I know, may use software to figure out the calendrical cycles these days. But at the time Covarrubias wrote *Island of Bali*—it was published in 1937—they employed programs of a more ancient kind:

"By the ownership of intricate charts (*tika*) with secret symbols painted on paper or carved in wood,

and of palm-leaf manuscripts (*wari-ga*) by which the lucky or unlucky dates are located, [the priests] make the people dependent on them for this purpose, because the Balinese are obliged to consult them for good dates for every special undertaking and have to pay for the consultation."

It all sounds awfully familiar. A system that no ordinary person can comprehend, but which is vital to a whole culture's welfare; and only a small guild of insiders is in possession of the key to the mysteries! We got off lucky, I think, with our piddling little Millennium Bug headaches. Though Y2K troubles didn't bring the end of the world, a big problem still remains for modern civilization, which is that we've all become dependent on things beyond our understanding. I suggest you think of the Balinese calendrical system the next time your computer inexplicably crashes or hands you a Terminal Fatal Error message, all you users of the perversely complex software that a clever band of high priests has succeeded in making essential to our daily lives. ○

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James Patrick Kelly

FEEL THE ZAZ

For "Feel the Zaz," the author says, "I put on both my fiction-writer hat and my internet columnist hat. They made my head sweat. The story before you is the latest iteration of "Feel The Zaz"; it had an earlier release as an audio play on the net's own corner of dramatic strangeness, the Seeing Ear Theater <<http://www.scifi.com/set/>> While they tell the same story, the two versions have many differences. Feel free to compare and contrast."

Illustration by Darryl Elliott





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Everyone wants to be Cary Grant. I want to be Cary Grant.

—Cary Grant

click

"Accepting for Vanity Mode is Dylan McDonough, artistic director of *Starscape*."

Dylan was stunned. For a few ticks he couldn't move, couldn't hear or even see the audience that filled the virtual Coliseum. It had happened just as Vanity had planned. Then Bug pounded him on the back. "Go on. Go get it!" He could see that Letty was crying.

Dylan brought his avatar off the stone bench into sheets of cold applause. The designers had recreated the Coliseum in all its marble and gilt glory for this year's Websters. Fifty thousand avatars watched in disappointment as Dylan played his avatar through the virtual crowd to pick up Vanity's award. He knew the zaz was plummeting. Everyone had been hoping to see what Vanity Mode looked like, or at least how she would present when she wasn't doubling. Nobody cared what Dylan McDonough looked like. The Academy crowd would be clicking out by the dozens, the general audience by the millions. Of course, it would have been impossible for most people to tell the difference. The avatars in the audience were still clapping; their smiling faces beamed up at him as he passed. But the Vnet was where Dylan made his living. He could sense unattended avatars going flat, losing their edges.

He accepted the Webster from Lillian Citrus, who had her avatar presenting with a tree viper curled into her décolletage. "Wow," he said. The word came out as a croak. Back at the studio, he bumped his voice fx from delight to elation, although it was grief that caught in his throat. He held the little golden monitor at arm's length, saw the reflection of his face twist across its polished surface. This was all that she had ever wanted, and she wasn't here to enjoy it. "On behalf of Vanity Mode and *Starscape*," he said, "I'd like to thank the Academy for this award." He set the Webster for Best Double of 2038 on the podium. "I have a brief statement to read." His avatar took out a piece of paper. "When we're done here this evening, I would ask that you click to *Starscape*, where we will launch a biography sim to coincide with this great honor that you have bestowed on us. We have tried to tell Vanity Mode's story on it. I regret to inform you that it will mark her final appearance on our site."

The unattended avatars in the audience seemed puzzled at this, but nothing more. Only those who were live with their users registered shock. Dylan's avatar unfolded the virtual paper slowly, to give people time to click in. The paper was blank, but he, Letty, and Bug had spent weeks scripting the speech, now open on the desktop from which he controlled his avatar. While he waited, Dylan wondered if what he was feeling was a surge in the zaz. Two years ago, that would have worried him. Back then, he was quite certain that zaz was nothing but click count divided by attention quotient. It was something you measured afterward, not what you felt in the moment, like laughter or applause.

"Vanity Mode," he read, "was a true star, as eternal as any of those she brought back to life on *Starscape*."

Vanity had said once that great zaz was like being kissed by an entire country. He remembered thinking she was crazy.

click

The day he met Vanity Mode, Dylan had taken Roman Barone to lunch. The pitch had not gone well. Barone let Dylan buy him a plate of *penne all'arrabbiata* and a glass of Chianti and listened politely while Dylan described everything he was doing to turn *Starscape* around. *Roman's Nose* was one of the most influential guides on the net—a million clickthroughs a day. If *Nose* recommended *Starscape*, they would have to kick Barone back half a percent of their gross and it would be worth every nickel. Barone had delivered over eight million clicks to Dylan McDonough's last winner, *Duck Brings the Lunch*. But that had been six years ago—an eternity.

"Sure, your zaz isn't that bad for a boomer site," he said, "but the numbers are so skewed. What did you say you're getting from the under thirties?"

"They'll come, if only to see what their grandparents are talking about. And once they click in, we've got them. Because people love having Elvis as their best friend. It's the names, Roman. Say them and you can hear the magic. Marilyn, Bogie, Groucho, Ali, John Lennon, Michael Jordan, Fats Waller, JFK. . ."

"Hey, I'm almost fifty and I barely remember these people. And my kids don't give a damn about Michael Jordan. If they know him at all, it's as that fat old jack who owns Nike. Frankly, I was shocked when I'd heard you'd bought a dusty little site like *Starscape*. What were you thinking?"

"It was all I could afford after the divorce."

"I'm sorry to hear that." Barone pushed some cold penne across his plate and then set his fork down. "But that doesn't change the demographics, Dylan: boomers aren't exactly a growth segment of the population. Besides, all the research says your tech makes them uncomfortable. You think millions of retirees are going to start using airflexes? Hell, no. The boomers don't get virtuality. Some of them still don't get *computers*. If they want dead stars, they go to dead media."

"But Roman . . ."

"Look at the time." Barone stood. "And I've got a two o'clock meeting. Sounds as if you've been working hard, Dylan."

"We all have. It's because we believe in what we're doing, Roman."

"Always a plus." His expression was smooth as glass. "Appreciate the lunch." They shook hands.

Dylan considered debasing himself completely, begging for the link, but decided against it. "I know our zaz is going to spike any day now," he said. "How about if I message you then?"

"Sure." Barone's snort was no doubt meant as a laugh. "People message me all the time."

click

Dylan had been trying to relaunch *Starscape* on the cheap; so far it was just him and Bug and Letty. They had four rooms of flop space in the partly abandoned Meadowbrook Office Park. Building Number Two was a mirror glass dinosaur from the late 1970's. Many of the seals in the window wall had failed, so their view of the interstate was distorted by the little fog banks that had been trapped for decades between panes of glass. The

HVAC was old and too expensive to run, so the landlord usually didn't. Letty hung sheets over the windows in the summer and ran a couple of monitor heaters in the winter. But Building Number Two had electricity and working toilets and an ultrawide connection to the net. If *Starscape* clicked big, nobody would care whether the carpet in Dylan's office was raveling.

click

"Honeys," Dylan called as he opened the door. "I'm home." He was determined not to let them see how worried he was.

There was no answer. He followed the screech of twisting steel and the crash of a concrete avalanche to the theater. On the dome, Bug and Letty were running a Manhattan sim that he had never seen before. He could see Letty's long hands dance in front of her as she used the airflex to play her avatar, an eighty-foot-tall Barbara Walters, through the ruin she had just made of Rockefeller Center. Dylan couldn't immediately pick out Bug's avatar, but then he didn't know what to look for.

"Bug, what is this?" He got no answer. "Letty?"

"It's Bug's new demo," Letty said, "and I already told him you wouldn't like it." She peeled back part of the roof of the Radio City Music Hall. "So where would you be if you were Cary Grant?"

"I don't know," said Dylan. "Empire State Building?"

"Nah." She dropped the roof section onto 50th Street. "Been there."

He watched, bemused, as Letty sent Barbara Walters on an uptown rampage. "Um, Bug?" he said. "I'm not sure I want users playing the stars. And why is she stomping taxis?"

"Bug isn't talking today," said Letty. "He's having a mood."

"I am not!" snapped Bug. "We've got Stalin, Darth Vader, and Mick Jagger riding around town." Bug was a short, volatile twenty-eight year old, who favored dark clothes and black humor. He slouched, scowling at the dome with arms folded. "Free ten minutes in the sim if you squash one of them."

"This is a party site," said Dylan, "not *Dirty Work IV*. It's not supposed to be about racking up high score." He had plucked Bug from combat sim hell and was still trying to curb his twitch response.

"Give it a chance, Dylan. We never show any bodies and it bumps the attention quotient two point six. Hey, it's satire."

"Satire is what closes Saturday night." Dylan tried to hide his annoyance. The demo was obviously a waste of their time. The idea was to give users the illusion of meeting the old celebrities, not to wear them like silly costumes. He wished Bug would stick to programming; content had never been his strength. But clearly Bug *was* having a mood, which meant that Dylan would have to pretend to consider his demo. "And Stalin is too dusty. You want someone people will know."

"You're in Lincoln Center," said Letty. She was a slender woman with sparkled hair and skin the color of milk. She moved with a dancer's precision; Barbara Walters clumped up Broadway like a grain elevator with legs.

"No! It's so obvious, Letty." Bug sighed. "I could paste in Lee Harvey Oswald," he said to Dylan.

"I was thinking more O. J. Simpson. So are you in this sim, Bug, or just peeping?"

"I'm Cary Grant and I'm hiding," Bug said. "Go seek is the point."

"You're Cary Grant?" said Dylan.

Bug had yet to look away from the dome. "We've got to get some action going, Letty. Try the Upper West Side."

"Cary Grant, Cary Grant," muttered Letty. "This is way too obscure, Bug. I don't know anything about Cary *blinking* Grant."

"He was in a bunch of Hitchcocks," said Dylan. "If finding Bug is the point, what's the payoff?"

"Oh, just the sex default," said Bug. "If she figures out my hiding place, the avatars screw." He leaned toward her. "Although I'm kind of losing interest."

"We're playing it totally softcore," said Letty. "Something like a kiss, maybe a bare shoulder, then cut to shadows on the wall." She spun Barbara Walters across Broadway to mash a taxi into yellow roadkill.

"Yeah, violence and sex, only very tasteful." Bug yawned. "Do me a favor, would you, and head uptown. Way-way-uptown."

Dylan put a hand on Bug's shoulder, trying to divert him from the sim. "When did you find the time to write a Barbara Walters AI?"

"I didn't." Bug glanced at him briefly and then focused again on the dome. "She's just an image and bunch of movement routines lifted from fossil video." Bug was not good at eye contact. "That's the beauty of letting the users play the stars. No biography scan, no AI. So we cut programming costs and can start adding lots more celebrities to the cast."

Dylan shook his head. "Who's going to pay to watch Joe Modem pretend he's Cary Grant?"

"I told you he wouldn't like it," said Letty.

"Joe Modem will pay to pretend he's Cary Grant." Bug hunched his shoulders as if to ward off a blow. "And thousands of other Joes and Janes will pay. Letty, tell him how much fun we're having."

"It may be fun," said Dylan carefully, "but is it *Starscape*? Your sim is like producing a play and then picking the actors out of the audience."

"Excuse me, gentlemen," said Letty, "but would you mind taking this somewhere else? I'm in the middle of a session here and I'm losing major attention quotient."

"I told you when you bought this blinking site that the AI engine was no damn good." Bug's voice was icy. "It's a waste of money to write dodgy code for every celebrity on the site—money that we don't have. But if we let the users . . ."

The deskbot interrupted. "Excuse me, pal, but we're going to have to ice this party for a while." It spoke in Humphrey Bogart's gruff voice.

"What is it, Bogie?" said Dylan.

"Could be nothing but a hill of beans. See, maybe I'm just software, but you hired me to do a job and I can't do it with one hand tied behind my back, now can I? Seems we got a visitor at the back door, a dame. Flesh and blood. Only I don't know why she's here and that bothers me. Makes me wonder if we've got some kind of security problem here. So who's been holding out?"

click

Dylan felt a momentary crinkle of panic. *Starscape* had been bleeding money over the past month. He'd spread \$373,000 over five different cards,

but had been careful not to overload any of them. The utilities and hardware payments were paid through next week. If Meadowbrook wanted money, they'd just reprogram the locks. Otherwise, no one knew *Starscape's* bricks-and-mortar address.

"Anyone order a pizza?" Bug's grin was forced. They all knew how close to the edge *Starscape* was.

"ID her," said Dylan.

"You want a flat ID or deep?" said the deskbot.

"Flat."

"Flat will cost you twenty bucks."

"Authorized," he said.

click

"Kay, she's got a name: Elizabeth Lee Corazon. And she's got a driver's license that gives us a date of birth of 4-11-02, which makes her thirty-four. Her Social Security number is 049-38-3829, eyes brown, height five-five, weight a hundred thirty-eight pounds. She lives at 43A Spring Street, Bedford

"Who does she work for?" asked Dylan.

"Appears she's out of work," said the deskbot. "Fact is, she's seventeen months into unemployment. Medical disability."

"What's the matter with her?"

"Med records are deep and deep will cost you, my friend."

"Well, at least she isn't here to turn out the lights," said Bug. "But why did she come to the back door?"

"Nobody is turning off anything, okay?" Dylan glared at them. "Got that?"

"Easy, boss," said Letty. "Bug's having the mood today. You can have yours tomorrow."

"Go find out what she wants while we finish here." Bug waved him away. "Maybe she's selling girl scout cookies."

"I'll have some trefoils," said Letty absently, as she rejoined the sack of Manhattan, already in progress.

click

As soon as Dylan saw their visitor through the wire mesh window of the back door, he thought he understood everything important about her. She was a stocky woman with broad, flattened features. Her brown hair did not quite cover the ears, which were big as fists. She stared back at him unabashedly, her eyes narrow and slanted, eyelids puffy. Her face seemed oddly childlike. If he had not known she was thirty-four, he might have guessed she was a teenager. She wore black jeans and a baggy adshirt on which a cartoon dolphin kept leaping out of a pitcher of Budweiser. She gave him a slow smile and mouthed the words *Open up*. He had never known anyone with Down syndrome—there weren't many left—but he believed he could handle her.

"I'm a double," she said as the door swung away. "And if you're *Starscape*, you need me."

"What?" Dylan was taken aback by her voice. It was as sultry as a silk pillowcase. "I'm afraid there's been a misunderstanding."

"This is *Starscape*, right? The site with all the oldie celebrities? *Live the glamor*?"

"I'm not sure I know what you're talking about, Ms. . . .?"

"Are you the one who writes those tags?" She stepped through the door and surveyed the loading dock from the entryway, head bobbing with excitement. "*Touch the legend*. Hey, we're just clicking for fun, mister, not buying a new Rolex." She moved awkwardly, like someone who would knock things over.

Dylan felt his cheeks start to burn. First the bungled lunch with Barone, then Bug's slugnut demo and now this crazy woman. "There's no *Starscape* here, this is . . . ah . . . Grant Associates. We do market analysis for non-profits. I'm afraid you've got the wrong address, Ms. . . ."

"Mode. My name is Vanity Mode."

"Mode?" He blocked her from coming any farther into the building.

"What's the matter, am I going too fast for you?" She put her hands together as if clapping, but didn't make any noise. "Maybe if I speak to your boss?"

"But I am . . ." He realized then that she must have had one of those new CAT implants where they scooped out a chunk of cerebellum and replaced it with a computer grown from embryonic stem cells. The IQ improvement rate had just recently nudged over 50 percent. "This is my company."

"Then that would make you Dylan McDonough," she said and then let herself fall against him. "Oh, sorry." Her breasts nudged his chest and her legs tangled with his. He gave way with a mutter of astonishment, uncertain whether the contact was calculated or merely clumsy.

"Sorry," she said again, catching herself up and then escaping past him into the empty loading dock. "So Dylan, the idea of *Starscape* is delicious but the site is cold oatmeal. Your celebrities talk like computers in rubber suits. Take your Judy Garland—not half bipolar enough. You want a Jim Carrey so needy he'd swallow a goldfish for a laugh. Your problem is that nobody's wounded."

Dylan had been about to ask this creature how she had gotten his name but changed his mind. "And you do wounded? I mean, when you're doubling."

She extended her arms and bowed. "They don't come much more wounded than me."

click

Dylan knew there was no way he could afford to replace all *Starscape's* celebrity AIs with human doubles. Still, it hadn't occurred to him that the tags might be overblown. "Where would you hide if you were Cary Grant?" he said.

"Ah-ha!" she said and nodded at least three too many times. "The old trick question trick." Then she went up on tiptoes beside the dumpster and peered in.

"No, not here. Say you were in New York City." When Dylan looked at her, the flat, empty face, the way she slouched, how she almost clapped her hands when she laughed at her own wisecracks, he was lulled into believing

she was slow, even if she did have a Computer Aided Thinking implant.

"Doesn't matter where." She thought it over; he could see the tip of her tongue between her lips. "Cary Grant doesn't hide. He might duck into the next room or make a quick getaway but he knows he can't hide because he's Cary Grant. The camera will always find him."

"Really?" He was impressed despite himself. "And how would you know that?"

"Because I was born in the wrong century, Dylan, not to mention in the wrong body." Her head bobbed. "I should've been my grandmother. She was a special assistant to Vincente Minelli when he worked at MGM. She once ate Louis B. Mayer's french toast by accident."

"There are more than just movie stars at *Starscape*."

"Oh, so now this is *Starscape*." She reached into the dumpster to snag an empty bag of Curry Snaps. "I can see why you'd want to keep this dump a secret." She folded it in quarters and stuffed it into the pocket of her jeans. "Well, Dylan, I've got Michael Jordan's rookie card and a home run ball that Ted Williams plunked into the bleachers at Fenway and a blue campaign button that says, 'I want Roosevelt again,' and Norman Mailer's ego pickled in alcohol—a joke, that's a joke." She clapped gleefully for herself. "I think the Hot Five was Louis Armstrong's best band and that *Rubber Soul* was the Beatles' best album, so let's start over, shall we?" She pirouetted across the loading dock to him like Julie Andrews in *The Sound of Music*, except that she stumbled twice. She offered her hand. Her fingers were short and thick; the nails worried to the quick. "I'm Vanity Mode and you're Dylan McDonough and—ta-da—this is our historic first meeting, so enjoy it."

click

Reluctantly, he shook her hand. Her skin was blood hot; he wondered if she were sick.

"Here's the script the way I read it," she said. "First you take me on the tour, then we draw up a contract and then I make you famous."

He let her hand drop. "Ms. Mode, I'm afraid you just don't understand."

"What do you mean, I don't understand?" Her face flushed. "Don't think that just because I look like me that I'm s-s-stupid." The voice was no longer a purr; it was as if her tongue had swollen until it was too big to get words around. "I *understand*, mister. Don't-don't-don't you think I'm *stupid*." He realized that her steamy manner of speaking was a kind of mask, and that the mask had just slipped.

"It's just that I'm very busy."

"Right," she said, "so busy that mister answers the packy door his ownself?"

"Are you all right?"

She closed her eyes; her lips moved but she made no sound. He thought she might be counting to ten or maybe saying a prayer. When she opened them, she smiled and was Vanity Mode again.

"Look, Dylan," she said, "the zaz for *Starscape* is what? Twenty-three? Twenty-five? You should be doing eighty."

"How do you know that?" He squelched his alarm. Yesterday's zaz had been twenty-two-point-eight, down three-tenths from Wednesday's. He

wondered if Bug or Letty might be selling him out. "Not that those numbers are right, Ms. Mode," he said, "but our zaz is proprietary information."

"Oh, I don't know it exactly." She smoothed her hands against the T-shirt. "I just . . . I *feel* it."

"You feel it?" He couldn't believe he was still talking to her. "And do you feel the times tables too? The stock market?"

She drew herself up. "I'm not like other people, in case you haven't noticed."

"This has gone far enough, Ms. Mode. . . ."

"Vanity."

"Vanity, because even if I wanted to hire you, I can't afford to pay a double."

"You can't afford not to."

"We have a budget, a very tight budget." Dylan thought of the hundred dollar bill he had dropped on the table at lunch. "There's no money in it for doubling."

"But you're Dylan McDonough. You must have made a package at *Duck*. And what about *Stinger*?" Her voice slipped again. "Mister don't tell right. What ha-ha-happened to you?"

It was a question that had nagged at Dylan for the last two years but he was suddenly angry at this Down Syndrome lunatic for asking it. "What happened to me is none of your blinking business."

"Sorry, mister."

"No, I'm sorry to be such a disappointment to *you*, Vanity. I'll try to do better in the future." He had made some bad guesses, had some bad luck and now he didn't know exactly what he was doing anymore. Instead of making his life happen, he often found himself watching as life happened to him—like this little fiasco.

"Mister, I-I-I . . ."

Dylan backed to the loading dock door. "Just so you know, *Duck Brings the Lunch* was pretty much over by '31. And I only owned 2 percent of *Stinger*. The fact is, if I could afford a double, I wouldn't be working out of this dump, as you so aptly put it." He opened the door. "So anyway, it's been nice meeting you."

This time she shut her eyes so tight that he could see her lids twitch. Her head lolled back. Dylan knew he ought to push her out of the building while she was helpless, but he couldn't bring himself to do it. He realized he was in the presence of two different people. The thick, awkward, retarded woman before him was Elizabeth Lee Corazon, who looked as if she were about to fall apart. Except that Vanity Mode was trying to hold her together with steely ambition and wisecracks and a voice like liquid sex.

click

"Okay," she said, "okay, okay, okay." She shivered and then smiled at him as if nothing had happened. "Okay, we go with a rewrite. More drama when the heroine starts from nothing. So: I don't need to be paid, Dylan, not yet anyway. You'll know when it's time." She waved airily at the open door. "Why don't you shut that? You're letting the flies in."

He didn't move. "I can call the police if you want."

"Good idea. Call the cops, the fire department, the marines and the star-

ship *Enterprise*. How long will it take to pry me out of here, poor little retard that I am? A couple of hours? Give me half an hour. I'll double anyone you're running on *Starscape*. A cold reading. If you're not interested, Mr. McDonough, I'll walk out of here and you can get back to whatever it is you're so busy not doing."

Dylan hadn't known just how desperate the lunch with Barone had left him; he was actually thinking of giving Vanity Mode a chance. But it was not only desperation that was making him reconsider. Dylan was ashamed of letting her make him angry and then snapping at her. He wasn't Bug; it wasn't his style to show feelings.

"How long have you had the CAT implant?" he said.

"Eighteen months, but what's that got to do with anything?"

"I'm just wondering if they've worked all the kinks out of it. Or did Elizabeth Ann Corazon always have the manners of a police siren?"

She became very still—no twitching, no head bobbing. "You leave her out of this."

Dylan shook his head. "Lady, you're her, okay? We IDed you at the door. Call yourself whatever you want, but keep the multiple personalities to yourself."

Vanity flicked her fingers dismissively. "She's just along for the ride."

The coldness of the gesture decided him. "You know," he said, "at least one of us is crazy." He leaned against the door and it shut.

"At least." Seeing that she had won, Vanity Mode giggled and clapped.

click

"Grant's Tomb!" Letty's shriek carried from the theater, through the computer room all the way to the loading dock. "You're in Grant's *blinking* Tomb?" The floor reverberated with the muffled thud of granite blocks being hurled onto Riverside Drive. If Bug answered her, Dylan could not hear him.

"Who's that?" said Vanity.

"Our engineer, Letty." He rubbed the back of his neck. "I don't know why I'm doing this."

"To get rid of me, remember?"

"Half an hour." He tapped his datacuff to start the timer. "The chime is your exit cue."

"You know what they say. Every exit is an entrance someplace else."

"They say a lot of things." He brushed past her. "Come on then." He didn't look back, although he could hear her following him over the hum of the computer room.

He paused at the door to the theater to watch Letty and Bug play the end of the new sim.

"I told you, I get the joke already." Letty gave Bug a friendly poke in the shoulder. "Now how do I lose it?"

On the screens, Cary Grant and a resized Barbara Walters were leaning against the rail of the *Titanic*. They gazed back at the Manhattan skyline silhouetted in a golden twilight. Barbara Walters nuzzled Cary Grant's shoulder.

"I've always been scared of women," said Cary Grant, "but I got over it."

Vanity came up behind Dylan but did not show herself to Letty and Bug.

"It's all wrong," she whispered. "They open their mouths and spoil the illusion. That's why you need a double to play your stars. Someone who knows what she's doing."

"We have software for that," said Dylan.

"I'm better than software."

Cary Grant picked a Lucky from a cigarette case and let it dangle from his lips. He held the case out to Barbara Walters but she shook her head. The silver lighter lit on the first snap. Wisps of blue smoke caressed the famous cleft chin. There was a glow on Barbara Walters's face that was not entirely a lighting fx.

"Another mistake," said Vanity. "He doesn't offer her the cigarette. People used to say that Grant played hard to get, but that wasn't it. He *was* hard to get. Which is why everyone wanted him."

The lights in the theater came up. "How do you like the smoking porn, Dylan?" called Bug.

"Hot," said Dylan.

"And I finally nailed Jagger on Broadway and 96th," said Letty. "Is that your Girl Scout?"

click

"Letty, Bug," said Dylan, "this is . . ."

"Ta-da!" Vanity swept through the doorway and did two perfect pirouettes with arms outstretched. "Letty's and Gentlebugs, I give you the one, the only . . . *Vanity Mode!*" She clapped vigorously for herself, gave a curtain call bow and, beaming, held up both hands as if to quiet applause. "Thank you, thanks, thanks so much, no, you're too kind."

They stared at her as if she had three heads.

"I know what you're all thinking," she said, "but seeing is definitely not believing."

"It's okay," said Dylan. "At least, I think it's okay. Vanity is . . ."

She rushed to place her forefinger to his lips. "No, no, don't be telling on me, Dylan. Letty, what are we using to control avatars?"

Letty shot Dylan an inquiring glance. He nodded. "Series 40 Airflex," she said, and tapped the CPU on her belt. "We've also got a couple of Sony discreets. And you can always run them off the console—but what's this about, Dylan?"

"The console would be best," said Vanity. "Bug, suppose I wanted to modify one of your characters on the fly, play her like an avatar."

"She's carrying a concealed weapon, is that it?" Bug said. "We're all hostages?"

"I've got this under control, Bug. Tell her."

Bug did not seem convinced. "Well, the easiest way is to go in through the doubling interrupt."

"So you *can* double on *Starscape*."

"We can," said Bug, "but we don't. Not yet, anyway. But the original programmers thought the code would be more robust if they included doubling in the initial design rather than kludge it later."

"Vanity doubles," said Dylan. "She's going to give us a brief demonstration of what we're missing."

Vanity twisted his wrist toward her and checked the datacuff. "About

twenty-three minutes brief. Hey, who do you have to screw to get some help around here?"

"Nobody but yourself." Bug turned his back to her and got busy doing nothing at the rack of unused airflexes.

"Bug, *enough*," said Dylan. "Letty, would you take her to the workshop, get her up to speed on the console."

"In twenty minutes?" Letty said. "I've spent two months massaging the console, there are at least a hundred macros. . . ."

"That's okay, Letty." She winked at Dylan. "I'm a quick study."

Bug waited until they left before he exploded. "Jesus *blinking* Christ, Dylan."

"I know, pal—a piece of work. And she's got to have a pretty extreme CAT implant. You should've heard her out on the loading dock."

"Sure they didn't put it in backward? Who the hell is she?"

"Bug, we're going to find out." Dylan pulled an airflex from the rack. "I should probably just bounce her out of here but I've got this hunch." He snugged the headband to his temple. "I feel like what *Starscape* needs just now is to get run over by a random variable." He bent over and fastened the ankle and wrist straps. "Maybe she's it."

Bug studied him. "It didn't happen with Barone, did it?"

"I don't think so." Dylan fitted the nose clips into his nostrils. "No."

"We're screwed, aren't we?"

He plugged the peripherals into his CPU and shrugged. "Let's just say that we could use a fairy godmother."

click

"I don't believe her." Letty rejoined them in the theater. "She's running the console like she built it herself."

"She's a quick study," said Bug sarcastically. "CAT power." He tapped a finger to his temple, then twirled it.

"Nobody is that fast." The theater dome began to darken and Letty jammed her peripherals into the CPU of her airflex. "Even with a CAT implant," she muttered.

"What's your pleasure?" Vanity's disembodied voice came at them from every direction. "Anybody, in any sim you've got."

"Bug?" said Dylan.

"I'm supposed to care?"

"Let her choose," called Letty.

"Is that all right with you, Dylan?" Vanity asked.

"Sure," Dylan said. "Whatever takes eighteen minutes."

click

On the dome the three of them were seated in the dining car at a table set for four. The silver gleamed on the white linen tablecloth. Letty and Dylan sat facing Bug and an empty chair. The walls were teak and mahogany inlaid with marquetry; the lights were garlands of bronze-work oak leaves. Out of the windows on their side of the car, Dylan caught a glimpse of the Danube as the train raced through the twilight toward the Czechoslovak

border. The sommelier, dressed in a tight black jacket and knickers with white stockings, filled their glasses with Veuve Clicquot. Dylan brought the glass to his mouth to get the benefit of the olfactors. He watched bubbles drift lazily through the champagne and pop like dreams. They tickled his nose. The wheels of the Orient Express sang along the rails.

"Kind of a slow starter." Bug squirmed in his chair. "Needs more action!" he called after the sommelier.

Katharine Hepburn hurried out of the drawing room. Dylan was surprised that Vanity had chosen to double the older Hepburn; she looked to be in her sixties. Her wild gray hair had been tamed into a bun. The face was drawn, which made her cheekbones even more astonishing; the tremor was scarcely noticeable.

"Thank goodness I've found you," said Katharine Hepburn. "Your friend, Bug—is it Bug? He was on the floor. I think he may be, he may be dead."

"I'm not dead." Bug raised his forefinger wearily. "I'm right here."

She settled beside him, cocked her head to one side and then another. "Why, so you are." She touched his arm. "Nevertheless, there's a body in the smoking room. In the next car, Mr. Bug, you must go and see for yourself."

Letty shook open her napkin and brought it to her mouth so that Bug wouldn't see her laughing.

"It's Bug," he grumbled, pushing back from the table. "Just plain Bug." The train swayed as he stood and he caught himself on the back of Katharine Hepburn's chair. "What's so funny?"

"Oh, do hurry," said Katharine Hepburn. "Bug."

After he was gone, she looked from Dylan to Letty and back again. "What?"

Dylan chuckled. "Nothing."

"Did I say something wrong?"

"No," said Letty. "It's just that you got to him—and in record time too."

"Is that good or bad?" Katharine Hepburn gave them a nervous little smile. She was wearing a heather gray pants suit and a black turtleneck. She slipped a hand into the pocket of the double-breasted jacket and pulled out a man's gold watch. "At least an hour until we arrive in Bratislava. Do you think we should alert the conductor about what's happened?"

Bug looked bemused as he re-entered the dining car. Both of him did. Behind the Bug dressed in black plytex followed another Bug in a white tuxedo, his bow tie askew and hair mussed.

"So it was you," said Katharine Hepburn. "I knew it was. I'm glad you're all right."

"Bug?" Letty goggled at the resplendent Bug Two. "Bug, you look like a million bucks."

Bug One glared at her.

"Well, I feel like eight cents," said Bug Two. He touched the back of his head gingerly. "Somebody hit me when I wasn't looking." He stopped in front of Katharine Hepburn. "That wouldn't have been you, would it?"

She looked up at him in perfect astonishment. "Why I assure you, Bug, that I did no such thing."

"What are you trying to prove?" said Bug One. "You're supposed to be doubling stars, not us. Close him."

"Close . . . close who?" The corners of Katharine Hepburn's mouth turned down. "I'm not sure what you mean."

Dylan didn't think it was very fair of Bug to break verisimilitude but be-

fore he could object, Bug Two grabbed a fistful of Bug One's shirt. "Maybe what needs closing is your mouth."

"Oh, great plotting." Bug One went slack in his twin's grip. "As soon as things get boring, have a fistfight break out."

Letty shot out of her chair and wormed between them, facing Bug Two. Reluctantly, he let Bug One go. "Now, Bug, haven't you had enough excitement for one night?" She pressed up against him as she straightened his bow tie.

"I don't know," said Bug Two. "Have I?"

She laughed. The engineer sounded the horn as the train skirted a dark Austrian village.

"Do be a help," said Katharine Hepburn to Dylan, "and get another chair for Bug here."

"Don't bother," said Bug Two. "Letty, how long has it been since someone asked you to dance?"

"You can't dance on a moving train," Bug One said.

"Too long," said Letty.

"The land flattens out." Katharine Hepburn beamed at them; her teeth were so big they were scary. "The tracks are straight as an arrow."

"There's a Victrola in the drawing room." Bug Two made as if to brush his fingers through her hair, but hesitated at the last moment.

Letty leaned into his hand. "What are we waiting for?"

"Letty, no!" said Bug One, but she paid no attention. He sank onto his chair and watched as they threaded their way through the dining car. His expression was grim. In the dome, Letty walked straight to the rack, picked up a discreet, set the helmet on her head, and went through the door. On the dome, she paused to glance back at Bug before she left. It was a look that would have set fires in a monsoon.

"Wow," said Dylan.

Katharine Hepburn tucked a stray curl of hair back into her bun. "They make a nice couple, don't you think? You young people need to dance more, if you ask me. You all work too hard. There's more to life than sitting at your desks, worrying yourselves to shreds about deadlines and spreadsheets and all that. The world was made for us to enjoy—as we are made to enjoy each other. A little romance wouldn't hurt you, Bug, or you either, Dylan."

"Romance is easy," growled Bug. "Now show us hard, something with grit."

"Bug, this is a party site. . . ." began Dylan.

click

The bus smelled of sandalwood and pot and sweat. Most of the seats had been ripped out and replaced with homemade furniture: beds and benches, a hi-fi system on a shaky table. Even though all the windows were open, it was sledgehammer hot, hot as sin, kick-the-dog hot. The bus was pulled over by the side of the highway and the hood was up. The view out of every window shimmered; saguaros put their arms up as if in surrender to the heat.

"Looks like the Magic Bus has broken down," said Dylan. "This gritty enough for you?"

Bug didn't reply. He was lying on a dirty mattress, staring up at the ceiling, which had been debauched with paint. It was as if Chagall had popped a Dali pill—bright shape and strange line melting, melting into rude oranges and reds, vulgar yellows, deranged blues—Mondrian with motion sickness.

The hood slammed and a thin, gawky man in mechanic's coveralls got on the bus. He acknowledged them with a nod. "We go about our daily lives understanding almost nothing about the world," said Stephen Hawking, in a computer-synthesized voice. "The second law of thermodynamics tells us that all machines will ultimately break down, and that it makes no difference whether the machine is the universe or a 1948 International school bus." He swung into the driver's seat and turned the key in the ignition. The motor coughed and started.

"It was a loose hose," Stephen Hawking said, over the engine noise. "Thank God it is still possible to increase order locally." He leaned toward the open door and called to a shadow still baking just outside. "Are you on the bus or not?"

Janis Joplin tripped in the stepwell and sprawled onto the bus. As she fell she twisted to protect the open quart of Southern Comfort she was carrying. A few drops spilled onto her hand; she cackled and licked them up. "Man, I am *wasted*." She was wearing a low cut red silk blouse that had sweat stains under the armpits.

"Aristotle believed in a preferred state of rest," said Stephen Hawking, "which any body would take up if it were not driven by some force or impulse."

"Far out." She grabbed the support beam, pulled herself up and held the bottle out to him. "Have some force, force to be reckoned with, man."

"No, thank you," said Stephen Hawking. "I am driving."

"How 'bout you two?" She aimed the bottle at Dylan and Bug and followed it down the aisle. Stephen Hawking crunched the bus into first gear and pulled back onto the highway.

"Not for me," said Dylan.

"Hey, I know you." Janis Joplin swayed next to him and he could smell the bitter fruit of her breath. "Or someone jus' like you. You're one of those uptight sonsabitches can never say what you're thinking. Or feeling. Feelings can't be wrong, feelings are what we're made of. Feelings are what we're composed of and exist of and live for, s'far as I'm concerned." She shook her head and her long hair danced in the swelter blowing at fifty-three miles an hour through the windows. "I think that kind of freedom is beautiful."

"Maybe you should sing." Dylan knew that some people liked watching celebrities veer out of control, so *Starscape* had a couple of sims that targeted that peculiar market niche. Humoring drunks, however, was not his idea of fun—even if they were famous. "Why don't you sing?"

"No way." She sniffed. "You think I just go ahead and sing for any jackoff who asks?" She took a hit off the bottle. "For me it's like . . . singing is like sex. Better than sex, sometimes. Why don't you ask me if I want to fuck?" She cackled. "I might actually say yes to that." The bus jounced through a rut and Janis Joplin staggered. She caught herself on the corner of Bug's mattress and noticed him as if for the first time. "You look kind of down, man. Something bugging you?"

"Okay," he said.

"Okay?" She puzzled over this for a few seconds, her lips moving. "Okay, what?"

"Okay, you're good."

"Damn straight I'm good." She cackled again. "Hell, I'm good and a half." She drifted over to the hi-fi; Dylan could hear her humming to herself as she sorted through a stack of LPs.

"Enough, okay?" Bug grunted and rolled off the mattress. "Sure, she's exactly what we need, except we'd have to hire at least thirty of her and we can't even afford this one. And she's crazy."

Janis Joplin put the record on the turntable. "Hey Bug," she said, turning from the hi-fi, "how do you get your mouth around all those words? Come on, dance with me." She opened her arms to him and cocked her hip. "You might get lucky, man."

"Get away from me."

"Okay, okay." She reached over and lowered the tone arm onto the record. "I see how it is with you."

"What do you mean?"

Janis Joplin sighed as the needle scratched across the lead-in groove and then her hair fell out and melted into the shag carpet on the floor. Her ears bloomed like dark flowers and her skin deepened to a midnight blue-black. She grew a guitar. By the time she started to play she was Robert Johnson.

"I went to the crossroad," sang Robert Johnson, "fell down on my knees." He gazed through Dylan as if his skull were clear as a fishbowl and his brain were a guppy.

"What's this about, Dylan?" said Bug. "What's going on here?"

"I don't know, Bug I'm just . . ."

"You don't know—that's the problem. At first I thought I was mad at her for wasting our time, but it's you, Dylan. What the hell are you doing? Making it up as you go along?"

"What's wrong with that?" asked Dylan.

"It is impossible to predict a definite outcome no matter how rigorously you define the starting conditions," said Stephen Hawking. "We can only predict a number of different possible outcomes and tell how likely each of these is to occur."

Bug shook his head in disgust. "You want to play this session out, go ahead. But as far as I'm concerned, it's game over." On the dome, his avatar disappeared from the sim with an impolite *plop*.

"Didn't nobody seem to know me," sang Robert Johnson, "everybody pass me by."

Stephen Hawking pulled the bus off the road. "I believe this is your stop." In the dome, Bug had already stripped off his airflex.

"Bug, wait!"

"For what, Dylan?" He stopped. "Tell me what I'm supposed to wait for." Bug gave him a two count before he spun away and stalked through the door.

Dylan thought about aborting the sim and going after Bug, except outside the bus window the landscape had gone impossibly blue and lush. The trees had indigo trunks and cerulean leaves, the clouds were bright as a robin's egg. It was his favorite of all their sims, the only one that could still make him feel like a little boy again. How had she known?

Stephen Hawking pushed an upright metal rod away from him and a complicated mechanism opened the creaking door of the bus. "Before one begins to theorize," he said, "it is helpful to examine all assumptions."

Dylan ducked down the passageway and stepped off into the sapphire afternoon light.

click

Vanity was waiting for him on a bench by a hut that looked like two scoops of blue ice cream. The Yellow Brick Road sliced through the cornflower fields of Munchkin Land to the distant gates of the Emerald City. But this was not the same woman who had come to the loading dock of Building Two of the Meadowbrook Office Park. Elizabeth Lee Corazon had been transfigured by *Starscape's* image processors: the ugly duckling had gotten the swan upgrade. The virtual Vanity Mode presented with a fairy tale face and the body of a sylph. She wore a white blouse and a gingham pinafore and the ruby slippers. "Time's almost up," she said as she rose to greet him. "So, Scarecrow, think of the adventures we could have together."

"Bug was right," he said. "You're good."

"Why is he so angry?"

"Just having a mood." He gestured and they sat together on the bench. "There's a programmer for you."

"He's angry at both of us."

"At me," said Dylan, "because of you."

She sighed and three Munchkins tumbled out of the blue hut.

"He's wrong, you know," said the first, hands thrust deep into the pockets of his pantaloons.

"I'm all you'll need." The second one tugged at his striped vest, which had ridden up over his paunch.

"I can multitask at least a hundred individual sessions simultaneously." The third thrust out his bearded chin and rocked from one foot to the other.

"Enough fx, Vanity," said Dylan. "Let's just talk, okay?"

The three little men turned as one and marched back through the door of the hut, muttering disconsolately.

"I can run even more sessions," Vanity said, "if you let me modify the console."

"And you'll work for nothing?"

"Let's just say that I'll agree to defer my compensation." She slid closer and laid her hand flat against the slats of the bench, her fingers just brushing his thigh. "I'll collect, Dylan." His olfactores picked up her sunshine scent. It made him think of his mother gathering in laundry from the clothesline. "Don't think I won't."

Dylan shivered; he could feel her gathering him in like a sheet. "Why do you want this so much?"

"Because I know exactly what you're trying to do here." Vanity Mode gazed off at the Emerald City for few moments, her eyes bright, then Elizabeth Ann Corazon finished her thought. "Feel it, feel it in my belly. At night I dream it right in my head, mister. All the pretty pretties. This where I belong."

Dylan was taken aback. "In Oz?"

"No, mister." She giggled. "No, no, no, *Starscape*."

"Elizabeth," he said gently, "who is Vanity?"

"My always dream." She caressed a fold of the gingham dress. "Always."

"And you let her take control?"

"Don't you talk to her," snapped Vanity. "Leave her alone!" Her pretty face flushed with anger.

"You drifted off and there she was." Dylan shrugged. "She sounded happy to be here."

"I'm here, Dylan," she said, "and *I'm* the one who is happy."

"You still haven't told me why."

She spoke without hesitation. "It's like your tag, *live the glamor*. You've made a world where everything is beautiful. *Touch the legend*. The myth is the message."

"You think Janis is beautiful?"

"Of course, she's the most beautiful of all. She absolutely owns the beautiful loser script."

On certain nights, if Dylan snooted more Placidil than was good for him and then squinted and held his breath, he could see the *Starscape* Vanity was talking about. But eventually he had to breathe or die. "You ever hear of Roman Barone?"

"Sure, he's *Roman's Nose*."

"I had lunch with him today. Pitched the site." Dylan looked away from her toward the Emerald City. "I don't think I got the link."

"So?"

"He says that the site is too dusty and our zaz is too skewed."

"Well, if that's what he says, tell him to shove his big fat nose up his ass."

It irked Dylan that she believed in *Starscape* more than he did. Her faith felt like another weight he had to carry when he was already staggering. He might use her talents but had no use for her illusions. "Barone says the only people who care about the old stars are boomers and, even though they've got money, they die by the busload every day. And they hate the hardware; the airflex makes them self-conscious. They never learned to fit reality and virtuality into their heads at the same time. Hell, some of them didn't even have televisions when they were kids, much less computers."

She dismissed Barone with the toss of her head. "He's wrong."

"If he's not, *Starscape* will go 404 by the end of the year."

"Well, I'm no boomer and I love the site, Dylan." She frowned. "What *are* the demographics on your zaz?"

He shook his head. "The last fix was six months ago. Fifty-and-older was almost 80 percent of all clicks; 25 to 50 was less than sixteen. But we've pulled back almost half of the sims since then and redesigned or replaced them. Now you can play croquet with Muhammad Ali, bake cookies with Gertrude Stein or take John Wayne's philosophy course—but all we get is the raw zaz. We can't afford another demographic fix."

"Your thirty-somethings have gone way up since then. Believe it."

"That's one of your feelings? Like the way you feel the zaz?"

A horn honked and around the bend of the Yellow Brick Road came a gray 1939 DeSoto Custom Club Coupe. It was an elephant of a car, with wide running boards and flaring fenders; the tiny windshield made it look nearsighted. Cary Grant braked to a stop in front of them. His elbow hung out the driver's side window.

"Listen, chum," he said, "why don't you stop sticking pins into her? She's not going to pop."

Dylan's datacuff began to chime. Vanity's thirty minutes were up.

"I know this girl," Cary Grant continued. "She can take a lot worse than anything you can dish out."

"Sorry everyone, but that's all the time we have for today," said Vanity. She crossed in front of the DeSoto, opened the passenger door and climbed in. Cary Grant ignored her, watching Dylan as if he were a Nazi spy. Vanity waved. "See you next time."

click

Dylan felt the perceptual wrench that came from being dumped suddenly from virtuality. His heart pounded. Afterimages ghosted across the blank white expanse of the dome. The world did a quarter spin and then locked in. The theater was empty.

"Where is everyone?" he said. "Bogie?"

"Letty's in the kitchen," said the deskbot. "Bug took a powder."

"He left the building?"

"Headed for parts unknown."

"And Vanity?"

"She's still in the workshop, in session with Letty. Boss, I don't trust that dame."

On his way to the workshop, he passed Letty in *Starscape's* little kitchen, actually just a storage room with a sink knocked in. A little refrigerator hummed in the corner; on top of it was the microwave oven in which Dylan cooked most of his meals. Letty was sitting upright at the table, still wearing the discreet, muttering into the microphone. Although the visor covered her eyes, her posture and the set of her mouth indicated that she was investing serious attention quotient in the session.

"Letty?" he said.

"Hmm," she said absently. "Later."

The workshop was Bug's warren. An antique red barber chair faced a vid-wall on which at least thirty different windows were open. Some were filled with code hieroglyphics, some were filled with wire frames of new sim objects. There were livecams of the surf at Redondo Beach, Dawn Zoftiggle's bedroom, and a clerks'-eye-view of the Seven-Eleven on the Nevski Prospekt in St. Petersburg. A few were action loops of monsters rampaging through inner cities: Kong in New York, Gojira in Tokyo and the Giant Behemoth in London.

Vanity Mode was sitting on the barber chair with the console in her lap. She twirled the chair around to face him. She was, of course, her lumpy self. "Deal?" She held out her hand.

"Are you and Letty still playing?"

"We danced. Then I stopped doubling Bug and now we're talking." She acknowledged his look of surprise with a bow. "I told you I can run a hundred sessions."

"And function in real time?"

"A session is a session." She continued to hold her hand out to him. "Virtual or real makes no difference."

"Are we in a session? Is that what this is?"

"Reality is session A1A." Her head lolled. "Always on top."

"And who are you doubling now?"

She laughed. "Why Vanity Mode, of course. But you're right, Dylan. Maybe I need to turn down the volume a touch, especially if we're going to be working together. So, deal?"

"If you're free, you're hired." Dylan crossed the room and shook her hand. "Do you know where Bug went?"

All the screens consolidated. Bug's avatar stared balefully out at them. "I'm not here so go away and don't touch anything," it said.

"When will you be back?" asked Dylan.

"Can't say. I left without telling me."

"Well, when you come back, ask yourself to step into my office."

The avatar turned its back to them. The message was stitched across the shoulders of its black leather jacket.

Dylan wants to see you ASAP.

Looks like he's hired Blinky.

click

After the bankruptcy, Dylan had decided to simplify his life. He had tried to convince himself that his problem was that he'd been distracted by the glittery side effects of his early success. Losing track of what mattered had cost him *Stinger* and Julie and the house in Woodstock and a large slice of self-respect. Of course, the banks had been eager to help him adjust his lifestyle to his new circumstances, which was why his office was spare and more than a little shabby.

Bogie was a state-of-the-art *Assistencia* deskbot but Dylan had him mounted on an old gray Steelcase that had been left behind when Building Number Two of the Meadowbrook Office Park had been shut down. There were a couple of mismatched plaid chairs that would have gone begging at a country yard sale and a musty fold-out couch where he had been sleeping for the past two weeks. Dylan was glad he had left the door to the executive wash room closed. He didn't want Vanity to see his suits hanging in the shower. About the only reminder he kept that he had ever been anyone was the Webster he had won for *Stinger*.

It was what Vanity saw first—possibly the only thing she saw in his office. She goggled as if it were the Holy Grail. "Can I?"

From the look on her face, he wasn't sure whether she wanted to handle the Webster or fall down and worship it.

"Help yourself." He stepped behind his desk. "Messages, Bogie?"

"Just a couple," said the deskbot.

"It's heavy," said Vanity. She cradled it in her arms and rocked it back and forth like a newborn.

"I've found that the longer you have one, the more it weighs. From who, Bogie?"

"First is a guy by the name of Creditworks-dot-com," said the deskbot.

"Delete it," said Dylan.

"I want one," she said, nodding excitedly. "I've always wanted one."

"Make me an offer."

"No, one of my own." She laughed. "Tell me about the night you won it. What does it feel like?"

Dylan didn't know what it felt like to win a Webster. The day of the ceremony there had been the champagne reception at two, moodfood at the Blackburns followed by early dinner at Maxx's, where they had drunk two thousand dollars' worth of Haut Brion. And somewhere he had met Kyle in a bathroom for a snoot of Placidil. When he woke up the next morning, the

damn thing had been on the nightstand. "It felt great," he said. "I'll never forget it as long as I live."

"Then there's Roman at Nose-dot-com," said Bogie. "Ever heard of him?"

Dylan felt the hair on the back of his neck prickle. "Wow." He laughed uncertainly. "Play it."

click

Roman Barone was sitting on a leather couch the size of Long Island. He looked like a little kid in it. He had taken his suit coat off and unsnapped the top snap of his shirt; he was wearing an airflex with the headband pulled up. The windows behind him appeared to be real; he had a view of a pond nestled in a grove of white pines.

"Dylan, this is Roman. First of all, you want something, you message me yourself from now on, understand? I find incoming in my mailbox about a half hour ago from Vanity someone—the address is in your shop. Sounds like a blinking alias. Second of all, I don't like to reward sitemasters for going deep ID on me. You want to waste your money snooping my personal life, fine. But just because you know where I lived in 1996 doesn't mean you know what I'm going to put on *Nose* tomorrow. I realize this kind of crap goes on, but if you want to play that game, you need to be a hell of a lot more . . ."

Dylan stabbed at the pause icon. "What the hell did you do?"

"I don't know yet," said Vanity. "I haven't heard what the man has to say." She set the Webster back in its place. "You'd already blown the link, Dylan."

He sank back onto his chair as Barone finished.

" . . . subtle next time. But here's the real reason I'm messaging you. I don't remember the episode where Homer Simpson became a veterinarian. Did you make that up? If you did, your sim is brilliant. If not, I want the reference. Let me know either way."

The desktop went blank.

click

"Wow," said Dylan. "I don't believe it."

"He was born in 1987," said Vanity. "*The Simpsons* was just about the only show that kids and their parents watched together in the nineties. When I went deep on him, I found out that he put a fan site up on Geocities in 1999 called *Duff Beer Showcase*. It 404ed in '01. You had a Simpsons sim up already; I just doubled all the characters and sent him a taste."

"How much did the ID cost?"

"Not much. I made some lucky guesses."

"About time someone had some luck around here." Dylan waved the dictation processor on. "Reply to last message." He hesitated, then pressed the pause icon again. "What am I going to say to him?"

"The truth. The sim is original to us and he should've found it himself. Call his bluff. He's probably never even clicked *Starscape* before."

Bug stuck his head in the door. "You want to see me, Dylan? Because if you don't, I need to see you." He didn't acknowledge Vanity.

"In a minute, Bug. Vanity, you think that's *all* I should say? Seems kind of curt."

"Hey Bug," said Vanity. "Sorry about . . ."

He ducked out of the doorway before she could finish.

"Don't pay any attention to him," Dylan said. "Like I said, he's having a mood. What else for Barone?"

"Well, you might ask if he's visited our Super Bowl sim yet. His father taught Phys Ed and was football coach at North High in Denver. I can do a John Elway that could fool even his kids."

Dylan nodded and then came around the desk. "Look, Vanity, I'm feeling a little gun-shy about this. You're absolutely right: I blew the contact and you saved it. So do me a favor—you message him back." He gestured for her to sit in his chair. "Use my name. Whatever you think will work is fine with me. Meanwhile, I'll pour some honey on our friend, Bug."

"You'd better," she said. "He hates me."

"Now, now, you're just an acquired taste." He patted her arm. "I'll give him some incentive to make the acquisition."

click

Dylan found Bug and Letty in the workshop, studying the vidwall. Half a dozen windows were scrolling old news feeds. The one in the middle opened onto a turn-of-the-century-sitcom with the sound turned down. A man with big eyes sat in a dentist's chair while a woman with big breasts flossed his teeth.

Dylan put his arm around Bug's shoulder. "She said she'd work for free so I told her she could stay. You're not going to give her a hard time, are you, Bug?"

Letty shot Bug a warning glance; he shook his head.

"And the first thing she does is get Barone to take another look at the site. I'd say that's a pretty good day's work." Dylan gave Bug a friendly shake. "*Roman's Nose*, people. Our stock options might actually be worth something."

Bug didn't react. Dylan glanced at Letty; she was made of stone. On the sitcom, a woman in a lab coat was talking to the patient in the chair. The woman had beautiful silver hair and she was very pregnant. "What? Talk to me, Letty."

Bug cleared his throat. "You ever hear of Baby X?"

Dylan frowned. "Let's see, it was something about a lawsuit. And the mom was on TV."

"Elizabeth Ann Corazon is Baby X," said Bug. "While you were in a session with her, I stepped out and paid for a deep ID. My own money, Dylan. Her mother was Beth Ann Lewis, she was in that sitcom *Big Mouth*." He nodded at the center window. "She played the other dentist. So Beth Ann is in her first hit show at age forty-six and she gets pregnant, only she's not married. The father isn't in the picture but Beth Ann still really wants the baby. She's very careful, has the amniocentesis and when the tests come back, everything looks just fine, so she elects to carry the pregnancy to term. It's a kind of minor news story; they even write the pregnancy into the show."

Vanity burst into the room. "You were brilliant, Dylan. I don't know how

Barone can pass . . ." When she saw the screens, she stopped. "Okay, okay, I suppose we have to go through this." She worried at her lower lip. "But just once, all right? How much have you got?"

"On April 11, 2002," said Bug. "Beth Ann gives birth to a baby girl."

"Ta-da." Vanity curtsied, her thick fingers holding the hem of her adshirt as if it were a dress. "A star is born."

"You want to tell the rest?" asked Bug.

"No, you go ahead." She was somber, unlike herself. "Maybe your script has the happy ending."

Bug shook his head. "I don't know that much more. Apparently the delivery is a disaster and Beth Ann ends up having a hysterectomy. And of course there was a major screwup at the lab because the baby was . . ."

"Defective," said Vanity. "I believe the word is defective."

"Anyway," continued Bug, "the jury finds gross negligence."

"Right," said Dylan. "We studied this in Bioethics. Baby X was the test case of the Uniform Conception and Gestation Act—the first successful wrongful birth suit."

"The jury awards Beth Ann sixty-three million dollars, which the judge reduces to twenty million. But as soon as the judgment is final, Beth Ann gives Baby X up. She is adopted by Raul and Marisa Corazon, which is where I picked up the thread. But that's as deep as I got."

click

They waited. Vanity stood with her eyes shut, as if she were listening to someone giving her advice. Then she nodded several times and approached the wall. "In some ways, my birth mother was very kind." She touched the window where her mother was having dinner at a restaurant with a man who had a parrot on his shoulder. "She put the entire settlement in trust for me; not only my share, but her punitive damages too. The trustees weren't to contact me or my adoptive family until my twenty-first birthday to ensure that I had a normal childhood. And because I was no longer the child of a celebrity, I didn't have to watch myself growing up ugly on the net."

Vanity turned to the three of them, leaning back against the windows that displayed the bare facts of her life. "But the Corazons were not the best choice the adoption agency could have made. They didn't abuse me or anything, but I figure they adopted me mostly to get the monthly support checks from the DSS. We never went out and I never made any friends. I spent most of my first twenty-one years in front of the TV, watching cable. We had one of the first vidwalls; Mommy Marisa liked to put four or five shows up at once. She was addicted to the old movies on AMC and Turner Classics and NostalgiaWorks; it was her mother who worked for Louis B. Mayer."

"And your birth mother did nothing?" asked Dylan.

Bug shook his head. "Anonymous adoption."

"That didn't stop you from buying a deep ID."

"Oh shut up," said Letty harshly. "Let her finish."

"Everything changed when I turned twenty-one. Mommy Marisa and Daddy Raul were shocked when they found out about the trust. All of a sudden they were so nice to me, everyone was. But I didn't understand any of it until after I had the CAT implant eighteen—no, seventeen months ago. I was a different person, you see. I wasn't just smarter, I was *me*."

"It must have been hard," said Letty.

Vanity smiled. "I made some mistakes. One of the first things I did after I got out of the hospital was go see my real mother. I wanted to thank her, you know. My real really . . . really truly ruly." She began to shake her head violently from side to side. "Bad Lizzy," she said with a moan. "Bad." *Shake. "Bad." Shake.*

"What's wrong with her?" said Bug

"Elizabeth," Dylan said. "It's okay."

"Bad." Vanity swallowed. "It was bad for both of us. Her career pretty much ended because of me. People just didn't understand why she gave me up. She told me that, at the time, she figured there were lots and lots of women who could mother me, and she knew she wasn't one of them. That's why she'd had the tests done, she said. She knew exactly what she could do and what she couldn't. I was something she just couldn't do." She faced the vidwall. On the *Big Mouth* window, the receptionist was spearing green olives out of the jar with a dental pick. Vanity turned the show off. "So that's my big secret and you'd better keep it. Otherwise snoops like Bug here will go deep on poor Elizabeth Ann Corazon and hurt some people who just want to be left the hell alone."

"Tell Dylan the rest," said Letty. "Unless you want me to? Bug knows already."

"Oh, *that*." She flicked her middle finger off her thumb. "I don't mind. It's part of the terms of employment, even though you're not paying me. But then I don't need to get paid—in fact, I would have been willing to pay *you*. So don't strain any muscles patting yourself on the back, Dylan."

She sat in Bug's barber chair. Her hands curled over the keypads he'd had custom built into the arms and she started typing. She closed all the windows on the vidwall. Bug shifted uncomfortably.

"So Letty and I sat down and had a heart to heart after I stopped doubling Bug. No offense, but there's only so much Bug a girl can take, even if he does tango. All I was looking for was an ally, but I feel like maybe I made a friend. Anyway, I showed her some Down family pictures. You see, there aren't as many of us as there used to be. Almost all of us get prevented, so people kind of forget how we work."

click

She opened window after window of brain scans, some twenty in all. "Positron emissions don't necessarily show our good side, but there you go." She strode back to the vidwall and pointed to the top row. "Now this line, that's you folks—five pictures over time, birth to death. You lose a few cells, what the hell, you've got plenty to spare—it's still a pretty picture." She clapped silently. "Now compare the next two lines. This one is an Alzheimer's patient over time and here's a typical Down Syndrome. Notice the similarities. By thirty-five, here . . ." She pointed to a scan in the middle of the Down line, ". . . we all start to develop brain lesions and neuritic plaques that look a lot like these folks up here in Alzheimer's land. In fact, lots of us do get full blown Alzheimer's, in which case we go down about twice as fast as the rest of the population. And even if we don't . . . well, put it this way. People with Down Syndrome don't usually live to collect Social Security." She giggled. "Fifty is a pretty good life. Any questions so far?"

Dylan had his arms folded tight, hugging himself to ward off her scary good humor. Bug and Letty looked equally disturbed. None of them said a word.

"Come on, cheer up." She shook her finger at them and grinned. "You'd think this was *your* life. Now this last line belongs to one Elizabeth Ann Corazon. This shot here was taken when she was thirty," she pointed to the fourth window, "... and as you can see, things are getting kind of hollowed out." She rapped her fist against the side of her head.

"My God, Vanity," said Dylan.

She made a sound like a game show buzzer. "I'm sorry, but your response must be in the form of a question. Now all the experts agree that she's got early onset Alzheimer's. Insofar as she can understand this, she's pretty depressed. Her doctors explain that she's not a particularly good candidate for a CAT implant since she has the life expectancy of a gerbil. But never underestimate the power of strategic investment. All of a sudden there are plans for the Raul and Marisa Corazon Wing of the Leahy Clinic and we come to the last window. You see this darker blob? That's the very latest Computer Aided Thinking device, a half pound of artificial neurotissue developed from embryonic stem cells. That, my friends, is where Vanity Mode lives." Her head lolled and she smiled. "For now."

click

The night after the awards ceremony, they brought Vanity her Webster. Even though it was only on the other side of the reflecting pool, Dylan, Bug, and Letty rode out to the mausoleum site in a limo. According to *NewsMelt*, more than ten thousand people had unplugged from the Vnet to gather at *Starscape's* corporate campus. Dylan had arranged for police from six neighboring towns to assist in crowd control. The nets were there in force; with the lights of all the livecams, it was bright enough to grow corn.

Vanity had never had any doubts about what she wanted to leave behind. The lurid bio sim they had concocted on *Starscape* was obviously a joke; even the most gullible of the gullible would find it hard to believe that she was the love child of Prince Andrew and Julia Roberts or that she developed Cherry Budweiser for Anheiser-Busch or that she had stowed away on the Third Mars Expedition. The only true-to-life scene in it was their first meeting and even in that they took out everything about Elizabeth and her sitcom mom, CAT implants and Down Syndrome. Her bio sim protected the secrets of the late Elizabeth Ann Corazon, but Vanity Mode needed to make a lasting gesture to her public. She wanted a place where fans could come to remember: her Eternal Flame, her Graceland.

Vanity had specified the design of her mausoleum and had spared no expense in building it, although no one but Dylan, Bug, and Letty had known of its true nature. It was a fifteen meter marble square; rising from its center was a Doric column atop which stood the life-sized figure of a woman. Her arms outstretched, she was caught in mid-pirouette. Her skirts flew out from her body. Her hair, a wild tangle, obscured her face. Her greatest hits were all there, carved in bas-relief on the marble base. Virginia Woolf, Bela Lugosi, Larry Bird, Ginger Rogers, Harpo Marx, Spider-Man, Jane Goodall, Louis B. Mayer, Sandy Koufax, Grace Slick, Rod Serling, George Gershwin, Sherlock Holmes, and Billie Jean King stared up in silent approval of Vanity Mode's eternally frozen dance.

She had even left a place for the Webster. Dylan carried it up the temporary steps to the top of the pedestal. He pulled the plastic sheathing from the trophy pad, set the Webster into the gripripte, which had aircured almost before he could straighten up. The composition of the sculpture was completed and as the public was concerned, so was Vanity Mode's script. But she and Dylan had one last scene to play.

click

Dylan There was something I'd never really understood about Vanity Mode until after Elizabeth Ann Corazon died. Elizabeth had always wanted to be Vanity, but Vanity was afraid of being Elizabeth. Elizabeth was a creature of flesh and bone, slow and weak and all too mortal. Vanity was information racing at the speed of light; since she had no fixed material form, her death did not necessarily follow from that of Elizabeth. She could live—no, she could *exist*—in one computer as well as another. It may be that the best part of that strange twinned woman died with Elizabeth. Information can't long to love and be loved. It can neither aspire nor dream. At least, I don't think it can.

/SFX/ STARScape FANFARE, UNDER . . .

Dylan But if properly stored, information is, for all practical purposes, immortal.

Male Host Welcome to *Starscape*, the interactive celebrity site. Come visit with your favorite stars of the twentieth century.

Female Host Gone but never forgotten.

Male Host Live the glamor.

Female Host Touch the legend.

Dylan It's me, Dylan.

/SFX/ STARScape FANFARE CUTS OUT

/SFX/ STARScape MENU CHORD

Male Host Please chose a simulation from the following menu.

/SFX/ KEYBOARD CLICKS

Female Host That simulation is password accessible only. Please enter or say your password now.

Dylan Zaz

Male Host You have selected (*pause*) *Heaven*.

/SFX/ HEAVEN AMBIANCE, UNDER . . .

Vanity Dylan, I'm over here.
 (*beat*)
 We did it! Ta-da!

Dylan We did.

Vanity I saw it all, monitored the unveiling on all the news-sites.
 We were everywhere. For maybe ten minutes, we *were* the
 net.
 (*beat*)
 You're not happy. Come to bed, darling.

Dylan I'm fine, just tired.

/SFX/ BEDSPRINGS CREAK

Vanity Give us a kiss.
 (*beat*)
 What's the matter?

Dylan I feel strange. Something's changed.

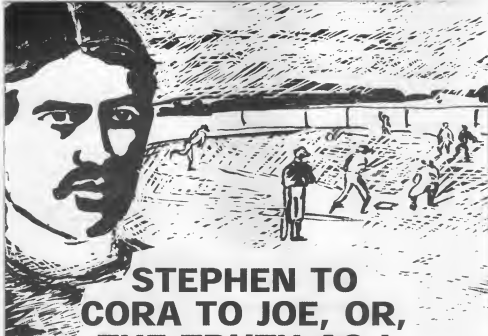
Vanity But this is our sim. And I'm just the same as I always was.

Dylan Are you? Well, maybe it's me then. Listen, when you were
 watching the unveiling, did you feel it?

Vanity Feel what?

Dylan I don't know. Maybe I'm kidding myself, but after I set the
 Webster on the tomb, I turned around and the lights of the
 livecams blinded me . . . and I felt them, millions, maybe
 billions watching me, lots of them crying, some holding one
 another, some disgusted with me and some angry and it was
 so much bigger than I was . . . oh, I can't describe it, except
 that you were right, Vanity. I could actually feel it.
 (*beat*)
 I could feel the *zaz*.

/SFX/ APPLAUSE MORPHS TO RAPID SCENE CHANGE
 CLICKS, WHICH FADE TO SILENCE O



**STEPHEN TO
CORA TO JOE, OR,
THE TRUTH AS I
KNOW IT, OR,
SHIFTY PARADIGMS:
THE USE OF
LITERARY ICONS AND
SPORTS MOTIFS IN
SPECULATIVE FICTION**

Rick Wilber

Rick Wilber has had a number of short stories and poems published in these pages. The son of an ex-Major Leaguer, his collection, *Where Garagiola Waits and Other Baseball Stories*, was a finalist for the Moore Award for best baseball book of 1999 and included material first found in Asimov's.

On a Sunday afternoon in September that threatened a downpour; in the top of the eighth of the last game of the season, with no one on and two outs and things pretty much looking okay, suddenly I couldn't find the strike zone.

Control tells you the truth about yourself. You go along thinking you know exactly where to place the ball and you're always getting it in there; and then suddenly you can't find the damn plate. Sliders that had painted the black just the inning before started missing wide or were down in the dirt, and my fastball—such as it is—lost the corners, coming in so fat I had to quit using it or risk someone coming back up the middle with a line-drive and taking my head off.

I walked the first guy in the inning on four pitches, two of them way wide and two in the dirt. He was their number seven hitter and I'd gotten him out three other times on easy groundballs. Now I'd walked him on four straight. Steve, back behind the plate, was not happy about that.

As the batter trotted down to first Steve came clanking out, the broken metal clasps of the cheap shinguards I'd bought him at the used sporting goods store rattling loosely. There was an ominous rumble of thunder from a squall line out over the bay. I looked that way, took a deep breath, tried to think my way through my control troubles by looking at the scenery. A rainbow was just forming, a thin arc of color emerging in front of the charcoal sheets of rain. Just a bit south of that, a huge mass of low blue-gray clouds boiled, the sky running from pewter to dangerous shades of green and black.

"Looks quite mean and low out there, David, don't it," Steve said in that Bronx jargon he put on for laughs sometimes. "But, hully gee, I don't think she's blowing our way." He slipped his catcher's mask up on top of his head and then held the ball out to me, nestled in that wide Rawlings mitt I'd bought him. "So, ya mug," he added, "how ya feeling?"

I looked over toward the stands. Cora was there, watching us, wearing a Rays cap in our honor, and sitting up straight on the bleacher seat so I couldn't miss the tight scoop-neck T-shirt, those glossy sports shorts she likes, and her granny sunglasses set up on the top of that blond hair. She looked gorgeous. She saw me seeing her, gave me a quick wave of her hand and smiled. Next to her on the grandstand bench was a small overnight bag. That, I thought, was a good indicator.

I turned to look at Steve. "I'm fine," I said. "Just lost it for a second there, that's all. It's been a long day."

Steve had seen where I was looking. "David, Cora's a real looker, got a real shape on her, she does." He grinned. "She's got everything an old fart like you could want, including that ample bosom, but if you don't start worrying about your pitching I'll lam the head off ya. Got it? We're two runs in front and this is the bottom of their order. Just throw the old pellet in there and let them hit it, right? Let your fielders do their job."

I nodded. "Sure. Let them hit it." That plan, I thought, gave our defense more credit than it was due; but I didn't say that. It was always hard for me to argue with Steve.

He leaned in close, stared at me hard, eyes narrowing. "Don't be rum, David. We don't have anyone in relief. It's your game, win or lose, all right?"

"I'm fine, Steve. Really. Let's get this guy." I was tense, and he could sense it. He was good at that. He smiled. "Loosen up," he said. "and just throw strikes."

He turned to walk back, stopped, turned back. "Did I ever tell you what my friend Joseph said about America's love for baseball?"

I smiled back. "Joseph? Conrad? No, you never did." Steve loved telling those stories about his circle of friends when he'd lived in England: Henry James, Ford Madox Ford, H.G. Wells, Conrad—they were all his pals there at Brede Manor down in Sussex, south of London, in that last year of Steve's life as he slowly died from the consumption that destroyed his lungs. Must have been quite a group when they got together on a Saturday evening to drink, smoke, and play cards and listen to the rattle of Steve's cough.

I wanted to hear the story, but then the ump walked out and made us break it up and get back to the business at hand. I walked the next guy, too, and then gave up a double and a single before finding my nerve and settling back down with us a run behind. We tied it up on Steve's single in the ninth before the squall line hit and the rain came down and everything got very confused.

I never did get to hear what Conrad had to say about baseball.

Her Upturned Face

I first met Cora on a Monday morning as I walked across campus from my office in the Arts Building to Cooper Hall, where I taught a nine A.M. class in Fiction Writing 402, Advanced Techniques for the Short Story.

She sat on the low brick wall that marks the path between the two buildings, reading a thin, little book. She wore a tight T-shirt that showed off her breasts, a pair of plaid walking shorts and those platform sandals that are so popular with the co-eds these days. She had broad features—there's nothing delicate about Cora—with that wide mouth and her red lipstick. It was too much make-up, but she wore it well.

As I walked by she looked up at me; that beautiful upturned face, her eyes wide, those lips pouty and full. "Professor Holman?"

I just smiled at first. I'd been teaching a long time, and you develop a kind of immunity to the sexual displays of the typical undergraduate. But then, I swear it, she said this: "The burnt sky thundered its rejection of Sean's entreaty. Nature, inimical Nature, arched her back and hissed at him. Her claws were out. He felt small, and still shrinking. Great cracks of fury pounded him, reducing him, until he was gone."

My jaw must have dropped. "Wow," I said. "you've actually read that?" It was from "Hide the Monster," the title story from my little collection, part of my Big Break five years before: a two-book deal, the short-story collection with the novel to follow. The collection got some nice reviews in places that matter and sold well; the novel I'm almost done with and my agent and my editor love what they've seen of it.

"I love that story," she said, and held out the book she was reading. It was the collection. "I've memorized whole passages from these stories. Will you autograph the book for me?"

I laughed. "Does rain fall from the cracked sky? Hand that over, dear."

And I found out her name so I could sign: "To Cora Taylor, A Beautiful Reader." She giggled at that when she read it, then thanked me, said she thought the book was the best thing she'd read in years, and that she'd been surprised to find I was teaching right here on campus. I thanked her again,

and we kept talking. She flirted. I flirted back, and then met her for drinks a few hours later and we wound up in bed.

It was all very simple, very effortless. Have you ever noticed how all the best things seem to just fall into your lap, and that the things you try for the hardest are the ones hardest to get? It's always been that way for me, and Cora was a perfect example. A girl like that? Wanting to bed a tired, old writer like me? It was laughable until it happened, and then it all seemed perfectly normal, like I knew what I was doing, like I had it all under control.

Active Service

There was a time when I could really play The Game. Pitcher for the national champs in college at Southern Illinois, four years in the minors after that in places like Paintsville, Kentucky, where I met Emily, the perfect girl for a young pitcher; and then in Lakeland, Florida, and Medford, Oregon, where I could show her off along with my skills. And then came my cup of coffee in The Show when the Cardinals called me up in September with the expanded roster and I got my shot. It didn't take me long to figure out that I was good, not great, on a pitching staff that took the Cards to the World Series. My career stats: no wins, two losses, an ERA of 4.05.

I was on the big-league roster for spring training the next season but couldn't stick. Then I went down to Triple A and couldn't find the plate. Same at Double A and while I kept at it for another year or two after that, the two truths I discovered were these: the downslope is a slick one and twenty-eight is an old man for a minor-leaguer. So before I was thirty I had to face doing something with the rest of my life. I thought I'd make a good college coach, and that meant getting some degrees, so I went back to school, got one degree and then another and then still another while I got interested in words and how they're put together and I started caring about writing. Baseball—that other life—disappeared into my past until finally, on the day I sold my first short story to the *Mississippi Review*, I didn't pay attention to it any more at all. It was fifteen years before I came back to it.

Fast Rode the Knight

Steve rowed up to practice the day I met him. We were two weeks away from our first game, and I was running in the outfield, trying to loosen up some old tendons and build up a little endurance at the same time. We play in an over-thirty league, all very amateur; doctors and lawyers and teachers and mechanics and salesmen and even one politician, a city councilman who has his eyes on the mayor's office. We all just play for the love of the game, but there's some real talent around, too. My first-baseman played in the minors, same for the shortstop. All four of our outfielders played college ball, and our one other pitcher, like me, even made it to the big leagues for a half-season or so. So while we're out here for fun, we take it seriously once the ump says play ball.

It was at the end of one half-hearted windsprint that I stopped for a moment to look out past the left-field foul-pole toward the little harbor there and the bay beyond.

It was an absolutely perfect blue-sky day, the way it can be in Florida in

the spring, the sun hot but not as deadly as it gets in July and August. Someone was out there in a rowboat, I noticed. I was happy for any excuse to stop and look for a minute or two instead of running those interminable half-hearted outfield windsprints. You get to forty years old and getting into shape isn't the fun it used to be.

As I watched, the rise and dip of the oars and the boat's forward motion spent out a series of small whirlpools that bordered a peaceful wake, the bright sun bouncing off the tiny wavelets. It was mesmerizing, and I kept watching as the boat reached the dock and the guy inside tied it off, stepped out, started walking from the dock across the two-lane street to where I stood at the ballfield's low fence.

"You're playing base ball?" he asked. He looked a little lost.

I nodded, added "Yes. We're a semi-pro team, just play for fun."

He was thin, under six feet tall, had a small mustache, wild dark hair parted right down the middle and then pulled back behind each ear. He brushed back that dirty hair. "You need a player?" he asked. "I play a pretty decent catcher."

"Well," I hesitated. We had a lot of guys who'd tried out for the team, but the truth of the matter is that most people just can't play the game. We weren't some fantasy camp, where they coddle wannabe's and give them uniforms and a chance to pretend. This wasn't slowpitch softball where everyone's a hitter and anyone can play. This was baseball. Hardball. The real thing.

But, on the other hand, we could always use a guy who could handle himself behind the plate. Truth was, nobody our age seemed to want to put on the tools of ignorance for more than a few innings, so this guy was worth a look. "Sure," I said, "c'mon on in and give it a shot."

And he did. And within the hour I knew we had the new catcher we needed. He was a natural, with a bullet arm, a great glove; a singles hitter but he always made contact.

He called himself Steve Crane, and I thought that was pretty funny, rowing up in an open boat and all that.

And then I realized he really meant it.

Her Blue Hotel

I met Emily in Paintsville, Kentucky, my first year in professional ball. She was drop-dead gorgeous and bored to tears in that tiny town, a prom queen turned part-time student at the local junior college while she worked for her daddy's insurance business. I was a star at that level of the game, and there was no competition in Paintsville. It took us something like ten minutes to go from hello at the Blue Hotel bar to oh, yes, back in my little apartment. She was the most beautiful thing I'd ever seen, and if the sex wasn't that good the looks were compensation. I saw her as the perfect ornament. She saw me as her ticket out, her lifetime pass to the big leagues, and that was okay by me. Hell, I saw me headed that way myself, and she made for one great-looking baseball wife, all perfect blonde hair and those tight jeans and that luscious accent, y'all.

But then I didn't quite become the ballplayer she'd figured on. Or the famous sportscaster either, though I gave that a try for a few years. Or even, later, the Famous Writer.

I didn't become much of anything and one day, five years into the marriage—she was patient with me, I'll give her that—I came home to packed bags and a note about what I hadn't turned out to be. Later, I found out she had a boyfriend who made more money than he knew what to do with in software sales, so Emily finally found somebody who could succeed at something, and that gave her a chance for a new beginning. That's how she told me to see it in that note: *A New Beginning*.

A Girl of the Streets

Cora wanted to know about my writing. It started with the how-many-words-a-day questions and went on from there, growing in complexity, some of them personal and some of them about the work. She wanted to be a writer herself, and kept talking about how she was willing to pay her dues to get there. I should have thought that through a little better when she said it.

She had stories to tell, god knows. I found out this: She was a local girl, Catholic elementary school at St. John's Parish out on the beach. Then four years at St. Petersburg Catholic High School, where she played on the softball team and edited the yearbook.

She was a good Catholic girl from a solid family—father a pediatrician, mother a teacher, two little brothers who played soccer. She was on her way to wherever it is good Catholic girls go for their careers when she got hooked up in college to a boy with the wrong kind of dreams and the wrong way to reach them and she found herself in trouble—drugs and pregnant and the boyfriend got mean. I didn't get all the details but there was no child and a nasty little scar on the backside of that gorgeous left cheek.

So she'd come back from all that. Back in school, wanting to write, looking great. And paying her way through as a dancer at the Club De Dream out on the beach. I started going there every Tuesday and Thursday night. She went on at ten, this good Catholic girl, and oh, my.

A Sense of Obligation

Halfway through the season I had a terrible Sunday pitching, getting roughed up for nine earned runs on the way to losing fifteen to two. We have a ten-run mercy rule in this league, and it was a good thing for us, since it ended the game early. Most of us went to the Little Regiment bar afterward, a dark-wood paneling faux-British pub not far from the field. A few pints of Guinness sounded pretty good to me at that point.

We weren't in there more than fifteen minutes when Cora left to play some pool with Humphrey Regis, our shortstop. He was fresh from a recent tough divorce and had been 0-for-4 at the plate, so a little eight-ball with Cora must have seemed heaven-sent.

That left me and Steve alone at the table for a few minutes. Steve pulled my collection out of his bag and told me he'd read it.

I stared at him.

"This is the copy you signed for Cora," he said. "She asked me to read it."

I nodded.

"It's good work," he said. "I like it. But . . ."

"But?"

He gave me a slight smile. "I know a little something about writing, David. I did well at it there for awhile."

I nodded. "Sure. I know. You're Stephen Crane, *the* Stephen Crane."

He shrugged those thin shoulders. "You know what I mean, all right, David." He leaned back in his chair, sipped on his beer. "Look, David, I don't know how or why this is happening, either, chum. I think I recollect something that Herbert said, about that machine of his."

"Sure," I said again. "H.G. Wells and his time machine."

He laughed. It sounded bitter. He started to rise. "All right, then, David. I'm sorry I tried to monkey with this. Cora thought you'd appreciate my advice, that I should try and help, that your career . . ."

"Cora thought?" I shook my head, waved at him to sit back down. "Please, Steve, stay. Look, I appreciate what you're trying to do, really, but my career is fine. Just about got my novel done, and my agent says she's close on the next deal. I might get to quit teaching if things really take off, you know."

"Bully for you, David," he said. Then he smiled at me. "David, can I tell you a story?"

"Sure," I said. "Tell me a story. Something about the Civil War, right? About red badges, about fighting and dying and all that."

I knew that sounded mean even as I said it. This poor guy really did think he was Stephen Crane, he'd convinced me that he really believed that, at least. And here I was teasing him, acting like I was hot stuff just because I'd written a few books and won a few awards.

He was staring at me. I tried again, nicer. "I'm sorry. Sure, absolutely, I'd like to hear a story."

He shook his head slightly. *The Red Badge*, he said, then paused for a moment. "You know, I'd never seen war when I wrote it."

I nodded. "I knew that."

"I thought I could tell the truth about war when I wrote it. I thought I had some talent."

"You did, on both scores."

He shook his head again. "No, not really. You know, it's hard for a man to realize these things about himself." He paused, sipped on his beer, went on. "I didn't know the truth from an electric street-car. I came to realize that in May of 1897, the Greco-Turkish War. The *New York Journal* hired me as correspondent, and it was there, at Velistino, that I finally saw the truth of war for the first time."

"And?"

He smiled, shrugged. "Death is very real." He took a sip of beer, smiled again. "I wonder how close to the truth I might have come if I'd lived past twenty-nine."

"Now you'll get to find out. You're writing, aren't you?"

He shook his head. "No. That's the rum thing. There's no time."

"No time? We practice a couple of times a week and we play a single game on Sundays. What are you doing with the rest of your time?"

He frowned. "What *am* I doing?" There was a long pause. "I don't know," he said. "I'm trying to think about it right now, trying to remember, and I don't know. When I'm not at the park, playing the game, it's all gray, blank."

"Oh, c'mon." The poor guy, I thought, was Looney Tunes. "You're here now, with me, and there's nothing gray."

"Yes, I am at that." His eyes widened. "Maybe it's you, David. Maybe it's you that's brought me back, you that makes me real."

I laughed. "Right. Me and my magic powers, that's it. Okay, then, here," and I grabbed the paper placemat from under his plate, flipped it over to the blank side, pulled my antique Waterman pen out of the reading-glasses case where I keep it, and handed it to him, calling his bluff. "Abracadabra, Steve. Here's your chance. Get writing. I'll just hang out here and make you real for awhile while you scribble."

He chuckled. "It might work at that, my friend," he said. He held up the pen to look at it—an 1893 Waterman #25, eye-dropper filled, a classic with a tapered cap and gold-filled bands around the barrel. Emily had splurged and bought it for me to celebrate my first contract. He gave me the damndest look, part smirk, part wonderment, then reached over to put his finger on the place mat, slid it back his way, and started writing. I shut up, and for the next couple of hours just sat there and watched him write. It was my job to keep the beer coming for both of us.

His handwriting looked clean and legible, but I couldn't read it from where I sat, beyond being able to see that it was prose. He wrote steadily, the motion of pen against the paper was so fluid, so constant, that I could see the story taking shape before my very eyes. There was no hesitation, no long moments where he was lost in thought, no getting up to wash the dishes or cut the front yard and vacuum the carpet or stare out the window or any of the other tricks I used myself to stall for time in the middle of a writerly panic. It was utter confidence at work—dumbfoundingly utter confidence.

As he got toward the end of the second paragraph, he coughed, the first one I'd heard from him in the couple of months he'd been around. It was just a sharp, quick bark, that first one; but a few minutes later came another, and then another, each one looser than the one before, like his lungs were filling with mucus right there in front of me. Finally, maybe an hour into that writing session—on his fourth or fifth placemat by then—the cough was so rattlingly hard that he had to stop and get it over with. I got up from my chair and came around the table to help him but he waved me away, then grabbed one of the big paper napkins from their holder on the table and held it to his mouth as he brought the mucus up. He spat into it finally, and his lungs seemed to clear. He tossed the napkin back on the table and went back to writing as I sat back down. Later, when the waiter came by to clear away the empty beers and the used napkin, I saw the red stains on the paper napkin.

The coughing eased after that, there were still some fits but nothing so dramatic as that one, and then, finally, he seemed to hit a stopping point. He set the pen down, leaned back in his chair, reached over to pick up his beer and took a good, long pull. He smiled. "You, of all people, must understand just how good that felt, David."

"That's a hell of a cough," I said.

He waved my concern away. "No, not that. The writing. It was," he searched for the right word, "it was real, do you know what I mean?"

"Sure," I said. But I didn't. Not then.

"David, everything's square with us, right?"

"Sure."

"Then I wonder," he started to say, but then he fell into that cough again, a quick bark that built to a loose rattle that he covered with another big paper napkin, his whole body convulsing with it.

"You ought to get that looked after," I said.

He laughed, and that brought him to a cough again for a minute. Then he smiled, nodded. "Yes. Get it looked after. Damnable thing."

Then he reached over to take my hand. Holding onto my hand, gripping it tighter as he spoke, he said this: "David. Why are you playing base ball? A fellow your age—you're the oldest chap on the team by a good ten years—you could be hurt, pull a muscle, break an ankle. It doesn't make any sense, really, does it?"

"No, I suppose it doesn't."

"But you're playing."

I smiled. "Yes. I'm playing."

"Why?"

I thought about it, started tossing out reasons, possibilities, excuses. "Hanging onto my youth? Getting some exercise? Still learning to hit a curve? Hell, I don't know. Because I enjoy myself. Because I can quit worrying about other things when I'm out there pitching."

"What do you think about when you're on the mound?"

"The game. The situation. The next pitch. Whether or not my catcher can throw that runner out at second."

He smiled, the cough gone. "To the last question, the answer would be yes, old chap."

It was my turn to laugh. "I don't know. I play because I love it. There's no excuses, nothing gray out there. I pitch and they hit or they don't, that's it. At the end, it's all very definite, very real."

"Real?"

"Yes, real. I can feel the ball, the glove, the rubber, and the hole I've dug with my right foot in front of it; the downslope of the mound, the feel of the ball's stitches against my fingertips, the way it comes off the side of the knuckle of this finger," I held up the second finger of my right hand, "when I throw a curve, or off this spot," I touched a spot a little higher up on that same finger, "when I throw a slider. It's all about physical sensations and concentration, lovely lovely concentration. It's reality. Unarguable reality. I love it for that."

He nodded. "Unarguable reality. I like that." He leaned back in his chair, put his hands behind his head and said this: "Art—your art, my art—is involved in that terrible war between lies and the truth, David, and the truth must win out. Describe it truthfully. Make it real. That's all I wanted to say."

He leaned forward. "If you're truthful about the surface, if you get the details right, then the interior is revealed and you can get close to the bone, get inside the bone, to the marrow, and tell the truth. That's all. This is something that took me years to figure out. Only at the end, lying there at Brede one day in the sun, dying, knowing I was truly dying, did I finally begin to figure it out. And then it was too late."

He let go of my hand, took the paper he'd been writing on, filled now with tiny scribbings that filled the page, folded it once, twice and then put it into the pockets of his pants. He looked at me. "You have these skills, David. They're very impressive, just like that little speech about base ball."

"But they're all a bit too, too," he hesitated, came up with the word, "too pyrotechnic. I can't find the truth of things in there anywhere. I don't see anything that really matters. That's all I thought I might say. All right?"

What was I supposed to say to that, to this man who thought he was an

invention of mine, someone I'd brought to life, created from the ether? "Sure," I said. "It's fine, Steve. Thanks for the input. I appreciate it, really."

"All right, then," he said. And he got up and left, waving once as he walked out the door.

Okay, I thought, finishing off my beer, that would be irony, right? A guy like him, a guy who thinks he's a dead writer, preaching to me about the truth.

I set my empty beer glass down on the table, tossed a twenty on top of it, and went over to the pool table to shoot some eight-ball with Cora. Later, we headed back to my place at the beach, the one with the second-story deck that looks out over the dunes to the Gulf of Mexico so I can watch for the green flash that comes with some sunsets here. It's a bright emerald moment that shoots straight up from the final instant of the sun's disappearance into the Gulf. They're wonderful and rare and require concentration, focus, to see. Some people watch for years and can't get the hang of seeing one. I'd seen a lot of them—dozens—over the years.

I wondered, as I got into my Lexus with Cora, if I'd ever get to see what Steve had written on those placemats. By this time I'd read everything Crane had ever written. I'd know in a heartbeat if this guy was the real thing. I wondered about that all the way home. Later, the green flash was terrific. So was Cora.

Yellow Sky

"He was just trying to help you, David," Cora said to me on a Sunday morning a week later, the early light coming in the bedroom window to backlight her, so I couldn't see much of her face, just the penumbra of that long, blond hair around her, a vision, a miracle.

She rolled over on her side to face me, propped herself up on one elbow, shook her head to clear her hair out of her eyes. We'd argued about her telling Steve that I was a writer, too. Now she wanted to explain herself. "He likes you," she said, "and when I told him you were a writer, he said he'd like to see your work, that's all."

I stared at her. "You really believe it's him? You do know that Stephen Crane died in a sanitarium in Badenweiler, Germany in 1900."

She stared back, slowly smiled. "So he's back from the dead, or some kind of ghost? I don't know, David. You tell me. You're the fiction writer. You're the one who makes all this stuff up."

I played along. "I wonder how he got here, then," I said. "He keeps talking about H.G. Wells and his time machine. I looked it up to make sure. The Time Machine was Wells' first novel, that's all—an allegory about the British caste system in the Victorian Age."

"So what," she said, leaning over to kiss me on my stomach. It tickled. Laughing, I pushed her back, then reached up to touch that perfect chin, run my fingers across those lips, as beautiful in the morning on their own as they were during the day when she'd put on her lip gloss and lined it in. She was young and perfect and I wasn't either one. And she'd actually bought a copy of my short-story collection, which made her one of about a thousand people in the whole damn country. Part of me felt pretty awful about having an affair with a girl of twenty-two. But part of me felt I was not to be blamed. At least, with Cora, I was alive again. I was even writing

again. Not particularly well, I thought, but bad words on the screen are better than no words at all.

I didn't know how long the bubble would last, floating along there in the metaphoric breeze with me inside it, playing these kids' games—sex with a twenty-something, baseball with a guy who claimed to be Stephen Crane.

Cora laughed. I watched those breasts move as she sat up on her knees and looked down on me. "You should get him to come guest lecture in your short-story writing class. Now that would impress the students."

"They'd believe it was really him," I said. "All that stuff about Conrad and Ford Madox Ford and Henry James and all the rest—they'd lap that up. And the part about Wells and his time machine, they'd go crazy for that. All most of them want to write anyway is sci-fi and fantasy."

"He is pretty damn convincing," she said.

"And good looking, too," I added, "in that dangerous kind of way."

She reached down to feel me. I was ready and she moved over on top, concentrating, her eyes closed as she eased on down. Then she opened her eyes—those perfect eyes—and smiled. "Yes," she said in a whisper, "he is kind of good looking, and dangerous."

And then she started moving, up and down, and I started to lose control again.

That afternoon she came to the game to watch. It was the first time she'd done that. She didn't miss a single one after that. She even started keeping score.

One Dash—Horses

The next game, Steve turned a single up the middle into a sliding double when the centerfielder took his time fielding the ball and coming up to throw. Steve saw this as he rounded first and just kept going, sprinting hard for second. His slide was showy and maybe a little risky, spikes up pretty high; but he got in there safe and then I brought him in with a single of my own two pitches later. That moment, when he raced like a thoroughbred across the plate well ahead of the throw from left to score the tying run for us, was the second happiest I saw him in the six months he was here. His narrow face with that dour, scraggly, wild look on it finally lit up in a huge smile and he clapped his hands and shouted happily as he scored. His cough was gone. Never once in a practice or a game did I hear the faintest hint of that deadly rattle.

Later, in the dugout, he said this to me:

"I love running, lungs full of air and legs flying. It's an honest measure of a man, isn't it, David?"

I smiled at him, nodded. "Sure. An honest measure."

"You know, David," he said, crossing his legs there in the dugout and pulling out his pipe to suck on it dry, since the league rules didn't allow you to smoke. "You know, near the end, when the consumption had about claimed me fully there at Brede, Herbert would come visit."

"Herbert? Oh, H.G., right?" I said. "You know, he once said that 'The Open Boat' was an imperishable gem."

He smiled. "Really? Nice of him. That was a true story, you know."

I nodded. "The *Commodore* went down off the Florida coast. You were on your way to Cuba to cover the insurrection and you and the captain and a

few others wound up in a lifeboat. You drifted just off the coast for a couple of days and then finally tried to ride it in through the surf. One guy died."

He smiled, nodded. "Close enough, David."

"And the month before that, waiting for the *Commodore* to be ready, you stayed in Jacksonville, Florida. That's where you met one Cora Stewart. She ran the Hotel de Dream."

He smiled. "She was stunning, David. A big ample bosom, that blond hair that she would loosen and let fall around her shoulders." He sighed. "I forgot everyone else."

"The drama critic for the *Chicago Daily News*?"

He nodded. "Amy Leslie. Lovely woman."

"But Cora?"

"Better. By yards old chap, by yards and miles."

Then he went on. "Herbert would come visit Cora and me there at Brede, and he'd bring along a whole group of nieces and nephews so we could play rounders. I taught them how to play base ball instead. With a cricket bat and no gloves. That was the closest I came to base ball over there. Rounders, with a cricket bat." He shook his head, smiled again and waved toward the field. "This, this splendid game. It's wonderful, David. You know that, right, how utterly splendid it is just be out here playing baseball on a Sunday afternoon?"

I did know it, and told him so. You start to get a little older and suddenly things like a good hard slider down low and away, a hard-hit double off the wall or even a scratch single up the middle—sure, they matter. Like making love to a beautiful woman in her twenties, like getting good reviews on your short-story collection, like writing well and knowing you're in that zone: like all those things, it matters.

"Are you still writing?" I asked him.

He shook his head, then stood up, took in a deep breath through his nose. "What do you smell, David? Right now, take in the air and tell me what you smell."

I smiled, took a long, deep sniff. "Fresh air," I said, "and green grass."

"Leather," he said, holding up the glove I'd bought him, a good Rawlings catcher's mitt, an XPG 2000. "And sweat. And the dirt of the infield. I missed all this."

"Is it still the same?"

He laughed, picked up one of our metal bats, Louisville Slugger Terminator, thirty-four inch, thirty-ounce. He held the bat up and laughed again.

"Yeah," I said, "me, too. I miss the smell of the wood. We still had those wooden bats when I was a kid, you know."

He sat back down, slouched back against the bench. "It's close, old chap. It's nearly the truth. It smells like my childhood, like my father, the preacher, before he died. It smells like learning the game, throwing and catching and hitting out in the vacant lot next door. It smells like college, like playing for Syracuse and throwing out that Colgate man who was trying to steal. My god, I could play, David. I could really play."

"Why did you quit? Your health?"

He shrugged. "I suppose. Life. Death. My writing. Finding the truth. They all mattered, too. And baseball is, after all, only a game."

"True enough."

"I'm on deck," he said, and stood, picked up the metal bat, walked out to the on-deck circle and slipped the weighted doughnut over the barrel. I watched him as he took a few swings to loosen up. He was thin, but healthy;

god, he glowed with it. Then Tommy ground out and it was Steve's at-bat again. He turned once to look at me, smiled, and then stepped into the batter's box. Two pitches later he slapped a single up the middle. The look on his face as he stood there at first, happy with his base-hit; there was some truth, some reality, in that, too, I thought.

The Monster

I've lied about a lot of this. I drive a gray Honda Accord, not a Lexus. I've never seen the green flash at sunset. Cora wasn't really that good looking, or that young, or even a student. She didn't dance at the Club De Dream, she worked in customer relations for the phone company, and she was well into her thirties if she was a day, and her breasts sagged and she hadn't read my short-story collection and she didn't flirt with me and we never made love. My earned run average in the big leagues was really 7.50. I was only up for one game, not one month, and I got ripped by the Mets for three very long innings. In fact, I was never in the big leagues at all but was lucky to spend three years in the lower minors, trying to get by with breaking balls. I never did have very good control.

My short-story collection sold six hundred and fifty copies and the reviews were awful. My novel? In four years I've written about ten thousand words. Are they good words, at least? I don't know. I don't think so.

I make it all up. That's what fiction is, I thought—all lies. It's not real, it's safer than that, there's more distance.

Here's the truth about Emily, my ex-wife. She wasn't nearly as good looking as I said, and she was a great deal nicer. In my second year of minor-league ball, in Medford, Oregon, we had a baby, a perfect little girl, Annie, her hair as red as her mommy's.

A year later I was in Lakeland, Florida, playing A ball for the Lakeland Tigers in the Florida State League. It was ten in the morning and Emily was at work; her job as assistant manager at the Pancake House paid our bills while I struggled to find the strike zone. There was a fire in our apartment complex. I crawled in through a bedroom window and rescued Annie but my face was ruined in the effort and by the time my wounds had healed my baseball career was over, my wife and child had left. I wound up homeless. I died penniless at twenty-nine.

Or maybe it was this way. Emily was a hooker, working the streets of New York. I rescued her from that and we had a child, a beautiful little blond Annie, and for awhile everything seemed fine. But then I was let go by the Cardinal organization and I couldn't find work, and Emily went back to what she did best and little Annie died and Emily was murdered by her pimp and I was a crackhead and I died, penniless, in the gutter, at age twenty-nine.

Or, no; our child was abducted and I found her, dead, in the woods, her body placed against the rotten trunk of a downed tree that lay in a bower, her body framed by the overhanging branches so that the autumn sun came through like cathedral lighting. There were ants on her face, crawling in and out her nostrils, the empty sockets of her eyes. I was shattered by that sight. No, I was the murderer, and I turned myself in and I was executed in Florida's Old Sparky, smoke rising, sparks flying, the smell of burnt flesh. I was twenty-nine.

No. We were all in a small boat together. Me, my wife, our daughter,

adrift after our cruise ship sank off the coast of Florida. We could see the shoreline, huge breakers rolling in just a few hundred yards away, so big we didn't dare try to get through them to safety. Finally, exhausted, we had to try. I made it, and dragged Annie to safety; but Emily, poor Emily, drowned and I've never forgotten the look on her face, the rage of it, as she slipped away. She wanted so badly to live. It broke my heart. She was twenty-nine.

No. Those are all lies, too, of course. Here's the real truth:

My father was an agent for Farmer's Insurance in Edwardsville, Illinois. He was good at his job. Mom taught English at Ward Junior High. We had a good life there, my brother and sister and I. I played Little League and we won more than we lost. I went to Mary, Queen of Peace for grade school and survived the nuns, then Edwardsville High School where I played football, basketball, and baseball for the Tigers and did fine. Then off to major in English at Southern Illinois University, where I discovered Crane, and myself, and a good change-up that got us to the Division II national championship game, where we lost to Cal Poly when I gave up a scratch single to their worst hitter at the wrong moment.

My two best friends went to Vietnam while I played baseball in college. One of them came home alive; the other in a box. I was lucky in the first draft lottery and didn't go. Instead, I started that minor-league career, which stayed minor-league in writing, in life. I married a nice girl. We have a nice family. I have nice degrees from nice colleges, and did a nice master's thesis on the truth in Stephen Crane's fiction. I teach at Pinellas County Community College, where I'm head of the creative writing program. I've sold exactly three short stories—one to the on-line version of the *Mississippi Review*, one to *Elysian Fields*, and the third to *Alabaster*. That makes me well-published by community-college standards. I make a nice living. When I write, I really use that antique Waterman that Emily bought me. It connects me, somehow, to the man I studied so much.

I play baseball on weekends with some other nice people. We lose more than we win, but I'll be damned if it isn't fun. Just like Steve said, it's an honest measure of a man, this splendid game. When you face a good hitter, when you're at bat facing a hard slider, when that sharp grounder comes your way or that sinking liner loops toward you in right—you can't hide, you can't lie, you can't fake it. You make the play or you don't. Reality sounds pretty boring, doesn't it? But that's it, that's me, that's the truth of it.

A Notebook

And there's this, too: Stephen really did come rowing in that Sunday in May. He tied up his rowboat and walked over to watch us and we gave him a glove and a ball and a bat and, my, he could play The Game. We finished with two wins and twelve losses the season before he came. We won ten this past season, with Steve catching and hitting third. He made me a better pitcher. I learned things from him, some of them about baseball.

I looked up his stats, which is what we do in baseball. He played in the Knickerbocker League for the New Jersey Athletics. They played at Elysian Field. He gave the professional game five good years before he turned to writing for a living, where he finally made a lot of money and married a rich, young socialite named Cora Stewart. They moved to England, where he became a real man of letters and lived a long, productive life.

No. I lied about that. He played baseball for Lafayette College his freshman year and at Syracuse University the next year, where he said "The truth of the matter is that I went there more to play base ball than to study." That's the way they spelled the game in those days, like two words. I want this to be accurate.

He flunked out of Syracuse, drifted into purposeful poverty in the Bowery, and emerged from there with a self-published short novel, *Maggie: A Girl of the Streets*. That got him the chance to do more, and so he wrote his *Red Badge of Courage* and became famous, if not rich.

The Red Badge was in 1894. In 1897, a famous writer at age twenty-six, he met Cora Stewart, already thirty years old and a failed socialite who ran a discreet bordello, the Hotel de Dream. They fell in love. He truly did survive the sinking of the *Commodore*, and wrote a news story that became a short story that is generally said to be the best thing he ever did—and every word of it a kind of truth: "The Open Boat."

Six years later he was dead, his frail lungs doing him in. Those last few years he traveled as much as he could, but called England his home. Henry James, Ford Madox Ford, Joseph Conrad, H.G. Wells—they all loved him and his work. They thought him important. In 1899 he declined rapidly. They sought a cure in Germany. Cora was with him at the end. You can look all this up if you don't trust me, and I wouldn't blame you.

And this is the truth, too: There really was a rainbow that last day in September, and those dark clouds to the east over the gray chop of the bay, and that small rain that came down to soak me, sneaking up on me until I realized, at game's end, that the rain, my sweat, the lies, my curveball, my lack of control—that all of it was a lie, that nothing was real except, maybe, Stephen and his stories and Cora, his and mine, there in the stands.

Wounds in the Rain

In the top of the ninth of that final game, Steve got me through it and I slowly found my control again. I let in enough damage that they tied the score, but we answered with a run in the bottom and then all I needed was three outs in the top of the tenth.

I was so tired, so hot and wet that I couldn't think straight. Steve, behind the plate, was calling the pitches. I trusted him completely. We were up by that one run and I had no relief. Slider, slider, slider to the first guy and he went down swinging on all three, thank god. One out.

The next guy up had hit a double in the seventh and here he was again. Okay, then, slider wide, slider inside, fastball down the middle and he ripped it—another double, this one into the corner in left.

Steve came clanking back out again. "Got that one up," he said.

I nodded.

"I'd like to win this one, old chap, wouldn't you?" he asked.

I was too tired to care, but you can't say that to your catcher. "Sure," I said. "Let's get two more outs and we'll all go home happy."

"Yes, that's it," he said, "everyone goes home happy." And he grinned at me, tossed me the ball.

This is probably what happened after that. I came in with a slider again, low and inside, but the guy went down and got it, drilled it right down the line. Foul.

Another slider, over the plate some more, and a hard groundball, but right at Randy Miller, our first baseman. He fielded it cleanly and stepped on the bag while the runner moved over from second to third.

Two outs and a man on third. Okay, more tired sliders, then; Steve with his two fingers stabbing at the red dirt behind the plate. Ball one. Strike one.

And then, like I meant it, like I could pick my spots like that, like I had that kind of control over my pitches, over myself, my life, I came in with a good pitch, low and outside. Strike two. Steve, back there, shook his fist at me, good pitch.

Same call, same pitch and the guy hit a two-hopper right back at me. I gloved it, pulled it free, tossed it to first and that was that. We win. Season over. First damn place for the first damn time in the five years I'd been playing again.

No. Same call, same pitch and the guy hit a two-hopper right back at me. I gloved it, pulled it free, and threw it fifteen feet over my first-baseman's head. Runner scored from third. Game over. Season over. We lost. We came close, but we lost. I lost.

It was raining, I realized. It had been raining lightly for two innings and I hadn't noticed until the game ended and the rain started coming down harder, with a distant flash of lightning and a rumble of thunder.

I walked over to shake hands with the other team, like we always do in this league. Nice game, I told them, which was true. Good job, they told me, and there was some truth in that, too.

I got back to the dugout and Steve wasn't there. I looked in the stands. Cora was gone. I dropped my glove into my athletic bag and saw some paper folded in there. Those placemats. His scribbling. The antique Waterman I'd loaned him was clipped to the folded sheets, holding them together.

I pulled the pen free, opened the pages. The first page had this on it in that careful handwriting of his:

None of them knew the color of the sky. Their eyes glanced level, and were fastened upon the waves that swept toward them. These waves were of the hue of slate, save for the tops, which were of foaming white, and all of the men knew the colors of the sea. The horizon narrowed and widened, and dipped and rose, and at all times its edge was jagged with waves that seemed thrust up in points like rock.

That's the opening passage from "The Open Boat." I looked at the second sheet. It opened like this:

The great Pullman was whirling onward with such dignity of motion that a glance from the window seemed simply to prove that the plains of Texas were pouring eastward. Vast flats of green grass, dull-hued spaces of mesquite and cactus, little groups of frame houses, woods of light and tender trees, all were sweeping into the east, sweeping over the horizon, a precipice.

That's the opening passage from "The Bride Comes to Yellow Sky."

I looked at the next sheet and it was the opening from "The Blue Hotel." All that writing that day, I thought, all of that just copy work, scribbling

down what he'd already done. I shook my head, tossed those first three sheets back into the athletic bag. Held the fourth and fifth in my hands, looked at them.

And didn't recognize them. I'd read every word I could find that he'd ever written and these words weren't among them. He'd been editing on it, you could see the scratched-out words and their replacements, see whole lines scratched out and rewritten. My hand started shaking as I read it. I got dizzy, then steadied myself, put those precious pages and the pen he'd used back into the athletic bag, then walked out of the dugout and stood there for a few minutes, looking up to feel the rain on my face.

Last Words

Okay, then, this is the truth as I know it. We lost, but losing is part of winning and they both are part of what's real. Maybe I threw that ball away on purpose so Steve wouldn't be able to let it go at that, so he'd be back in February when we start the next season. Maybe he'll have Cora with him, and maybe Conrad, so I can finally find out what he thinks of The Game. They'll show up that first practice, rowing into the harbor in that little boat, emerging from the haze and fog of February's heat over cold winter water. I'll walk over there, and say hi, and help them out of the boat, help them tie it up to the dock.

And then we'll play catch, take a little infield, some batting practice, catch a few flyballs, and just play the game, loosening up for the season to come, ready to find whatever realities, whatever truths, there are out there on the diamond. I think maybe it will happen that way.

At that moment, I stood there, face wet in that cool spray. Then walked over to the low fence, hopped it, and jogged to the harbor. The open boat was just thirty yards away, heading toward the gray sheets of rain sweeping in from the bay. Steve was in it, rowing. I could see the happy smile on his face. It was the happiest I ever saw him. Cora, there with him, turned around to look at me. I raised my hand. They both raised theirs, and then they waved, and then the rain came down harder and the gray closed in and they were gone. ○

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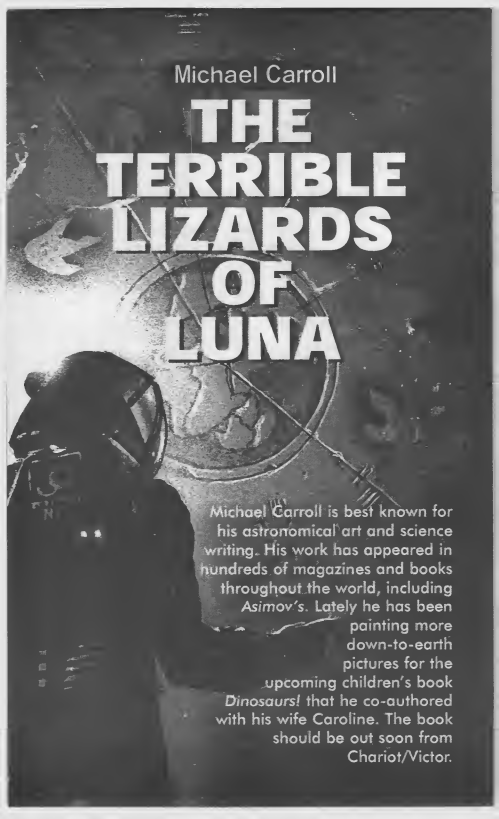
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Michael Carroll

THE TERRIBLE LIZARDS OF LUNA

Michael Carroll is best known for his astronomical art and science writing. His work has appeared in hundreds of magazines and books throughout the world, including *Asimov's*. Lately he has been painting more down-to-earth pictures for the upcoming children's book *Dinosaurs!* that he co-authored with his wife Caroline. The book should be out soon from Chariot/Victor.



Illustration by Michael Carroll

"So why didn't they?" asked the woman as she paced across the observation deck.
 "It's ridiculous," replied the man on the couch, his voice edged with impatience.

"Not ridiculous at all. They had one—two hundred million years to do it. Why not?"

"No opposable thumbs comes to mind," he said dismissively. He kept his bespectacled eyes on her long legs, trying to force his mind into something of a parallel track to hers. But it was difficult, especially after a sleepless night.

Kirk Teige never liked space travel, or boats, or even cars for an extended period. This two day trip would be his undoing, he supposed. He shifted his weight on the couch, trying not to sit on the air sickness bag in his back pocket.

"Now you're being ridiculous. They had—" she furrowed her brow "—one hundred and sixty million years to evolve thumbs. Instead, they developed frills and horns and spikes. Doesn't matter, though. I still say they should have had time to do it."

"Look, Dr. Faux."

"Please, call me Clarisse."

Teige leaned toward her. "Clarisse. People have bigger brains, and look at us. It took us a hundred thousand years to get there."

She was studying his ashen face. "Yes, and by the looks of it, you probably wish we never learned. Are you all right?"

The hint of a French accent warmed his churning stomach. "Actually, I never do well on travel."

"Unless it's down?" The doctor pointed toward the deck.

Teige smiled. "Caves never bothered me. It's just the getting to them that does."

"Yes, well, I think you should go to bed, professor. The caves of the Moon await you, and we'll be there in the morning. Perhaps at breakfast you will have an insight for me, no?"

"Perhaps," Teige said, float-walking through the hatch.

Teige bobbed down the corridor to his quarters. The ship's constant thrust gave only slight gravity, and it wasn't enough for the poor professor's intestinal fortitude. He wondered how others did it. Clarisse Faux seemed to enjoy the low gravity. Watching her reminded him of watching his wife scuba diving in the Caribbean, especially when she turned her head and that long chestnut hair floated around her chiseled face. Clarisse could have been a model, he thought. But she was married already, to her study of old things. It was obvious how excited she was about documenting the Apollo 17 site. Her archaeological expertise would be put to good use on the last of the initial landing sites. Like the other five landing areas, Taurus-Littrow was destined to be an historical landmark, controlled by the United Nations' Cultural Office. Teige, for one, was glad they were going to preserve those fragile footprints. Footprints on the Moon could last a billion years, unless tourists walked all over them.

Teige, on the other hand, had to admit that he, too, was still married. Still married to his wife, despite the fact that she had died a decade ago. Leukemia was not a good way to go, but then, was there a good way?

He looked out the portal at the blinding moonlight. A scant eighty thousand miles away, Luna's peaks and craters glistened close enough to touch.

The gunpowder plains spread like eternal beaches with no waves to caress them. His first cave destination was on the eastern horizon, but his first stop was directly below. Alphonsus Base spread a shimmering web across the dark crater floor, remarkably sharp even at this distance. He only hoped the city in the sky had a good pharmacy with better antacids.

"I see color in that face this morning!" Clarisse said cheerfully, handing Teige a cup of coffee.

"Last night was better, thank you." The professor gazed into his mug, watching the swirling cream. "You know," he said, "there are caves that are lined with a white liquid that looks just like this—'mother's milk,' we call it."

"I wonder if you'll find any in those lunar caves," Clarisse mused, knowing the answer but wanting the conversation.

"Nope. No water. Just ice. And not enough pressure for liquids like that. Still, it will be interesting. I do know one thing we won't be finding."

"What's that?"

"Dinosaurs."

"You see? And so I ask again."

"Why didn't the dinosaurs ever make it to the Moon?" Teige stated Clarisse's question. "And now that I'm feeling better, I'll tell you. I have no idea!"

One of the pilots had wandered in and was in the process of trying on several puzzled expressions. Clarisse glanced at Teige. They shared a momentary amusement, just the two of them. It was as if she were speaking to him in a language he had not heard for ten years, a vocabulary that no ear could perceive. But the heart could, and his was beating like a turbo thruster.

"Please, Captain, sit! What our distinguished spelunking friend is talking about is the fact that there were beings who ruled our planet for 165 million years. They ate and left footprints and tooth marks and feather and scale impressions, but what else did they have to show for their long stay?"

"Bones!" the pilot called over a mouthful of bagel.

"Bones, yes," Clarisse said. "No beer cans or tools or tires. Just bones. Doesn't that strike you as a bit unlikely?"

Kirk Teige wagged a donut at her. "They also left us some nice coprolites. Mustn't forget the dino dung. Perhaps nothing drove them to move beyond browsing cycads."

"Or eating each other," added the pilot.

"They were the biggest," Teige said, showing his bicep in mock athletic style. "They owned the place. Why change?"

Clarisse shook her head. "And it was left to those hairy little mammals to get to the Moon? No. I'm no paleontologist, but it makes no sense to me. We humans fashioned wheels and rolled across our self-made empire in wagons and trains. We with our big brains and opposable thumbs, we snatched the fires from Prometheus and put them in the belly of our rockets. But those dinosaurs ruled the planet for a very long time, and some of them had big brains. Look at the Velociraptor."

"Raptors were brilliant hunters," Teige shot back. "That doesn't make them rocket scientists."

"Apparently not. But I wonder why."

Teige smiled and plopped his coffee cup on the table. The brown liquid

hovered in the air for a few seconds before settling down. "Maybe you're right. First cave I crawl into, I'll look for dinosaur artifacts."

As the professor swilled down the rest of his coffee, he couldn't help but notice a gleam in the doctor's eye. It was a nice eye, and it came with another one to match, both glacial blue under that frame of rich brown hair. Teige was feeling self-conscious. He hadn't felt this way about a woman since the death of his wife. Ten years is a long time. And for the first time in that bleak decade, here was someone who he could enjoy. Someone with a sense of humor like his. Someone with a challenging intellect. Someone with, yes, very long and slender legs.

He shook his head and challenged her to another game of chess on the ship's entertainment terminal.

Landfall came six hours later. The ship settled softly onto the tarmac at Alphonsus Base. As it did, a sense of panic ripped through Kirk Teige. It was not the ship's arrival, but the doctor's departure. He rushed to her cabin. She was just picking up her satchel.

"Kirk! Come to see me off?"

"There are zillions of people milling around out there. I was afraid I—"

He stopped himself. What was he going to say? *I was afraid I would never see you again?* Ridiculous. *I was afraid I might miss you?* It was true. *I was afraid of being alone for the rest of my life?*

She seemed to read his mind. Slowly, gently, she put her hand around the back of his neck and nudged his face toward hers. Their lips met for one glorious, erotic, exhilarating moment.

"You know," she whispered, "sunrise at the Apollo Seventeen site isn't for another couple of days. I'll be right here, twiddling my opposable thumbs."

The professor weighed his options. His career was hanging in the balance. If he missed his flight, there would be no more for two weeks. His grant put serious limitations on his time line. Anything missed was as good as gone. But would he regret what he missed with Clarisse for the rest of his life? Whether out of timidity or practicality, his pragmatic side won out.

He shook his head. "My first cave is to the east. Mare Crisium. It will be night there in a couple of weeks, so I leave in four hours. Barely time to find my hotel."

"Too bad you can't fly."

"I'm hitching a ride with a survey team. They have a few other stops. Besides, I'm saving my flying money for when I go farside next month."

"I have your network info," she said. There was a hint of tease in her voice. "I'll get in touch as soon as my work is done at Taurus-Littrow. Maybe we can have a drink in this place before I go back to Earth."

"Yes, but I'll be here two months longer than you. I've got that trip farside, and it is *far*."

She put her finger against his mouth. "Shhh. We will see each other again. Soon. It's in the stars!"

An odd expression for a scientist to make, but Clarisse was full of surprises. That was one of the many reasons he seemed to be falling in love with her.

Up until now, the caves of the Moon had been—without exception—ancient lava tubes, leftovers from when the molten lunar seas drained into maria plains. But on the edge of Mare Crisium, where the Earth floated eternally just above the western horizon, stood a cliff face with a magnifi-

cent cave. It was like nothing Kirk had ever seen, and certainly no lava tube. The vaulted ceiling was more cathedral than cavern, and his helmet light glittered back at him from a thousand jeweled facets in the wall.

He took holocorder and other readings before wandering inside. His two assistants followed. There were formations similar to stalactites and stalagmites, usually formed by the long term action of water. "The theorists will have a field day with this," he said. "How can you get a stalactite in a place where you can't have liquid water? Fun stuff." And there were curtains of minerals sparkling in the light of their helmets. Teige found that he was enjoying himself, and for a few days, he scarcely thought of Clarisse. Except at night. Or at meal time. Or when somebody said something funny.

It was a long trip back to Alphonsus Base. There was too much time to dwell on things distant. By the time Teige made it back, Clarisse was long gone, off to do her archaeologist thing at Taurus-Littrow.

One thing set apart the established settlements from the outposts, and that thing was green. Any major lunar base worth its O₂ had at least one large area with living plants and trees. Some of the larger ones like Alphonsus even had gardens. Outside, the Moon was silver and gray, utterly barren. Majestic, yes. But barren. Life springing from the soil made a lunar stay more than an endurance test. It could actually be enjoyable.

He tried to do some work, but every time he looked into his monitor, he saw the reflection of a lonely man who had lost something precious. He poked his reflection's nose. "You miss her. Admit it! After all these years of staying free and unencumbered, you're stuck on someone. And by the time you finish here, she'll have been gone for two weeks."

There was one hope: perhaps she had emailed him. Then he could easily track her down. But his box was full of junk emails and professional correspondence, none of which was he in any mood to answer.

He went to the interplanetary network, reminding himself that the term *interplanetary* was a bit overblown for just the Earth/Moon system. Maybe when Mars grew a bit . . . his first couple of network searches were unsuccessful, but on the third try he found Dr. Clarisse Faux. Not her professional address, but her personal one. All those college years of computer hacking still paid off.

Teige dug deeper, breaking into her email files. He didn't know why he was doing it. Something drove him. Perhaps it was, as his late wife always said, "testosterone intelligence blockers." Whatever it was, he felt as though he were in touch with her, just a little, by seeing who the people were that she cared about. Her address book was a who's who of famous scientists, and a few famous poets and writers and artists. He was surprised. And he was ashamed.

I must really be crazy, he thought. This is invasion of privacy. Breaking and entering. Not to mention tacky.

He was about to log off when a name caught his eye. Bernie Milhouse. Post-grad-chum Bernie Milhouse? Paleontologist extraordinaire Bernie Milhouse? Could it be?

Teige searched the net for Bernie's info. It wasn't hard to track him down, and he had him on the comlink in minutes. There was a three second delay for voice, but one got used to it.

They spent a few expensive minutes telling each other how grand life

was. Bernie said he was sorry to hear about the death of Teige's wife (it *had* been a long time!), and Teige congratulated Bernie on his *Nature* paper describing his discovery of a new type of Mastodon. Bernie talked about the weather, and Teige talked about the lack of it. Finally, when the time seemed just right, Teige popped his question.

"Say, you haven't heard from a friend of mine, Clarisse Faux?"

"Sure. Just a month ago. Doing some project on the Moon, I guess. But she was really interested in my work."

"She was, was she?" Teige's voice betrayed skepticism.

"Hey, my stuff's not that boring!"

"No, no, of course not! My mind was somewhere else. So what did you talk about?"

"Mostly dating."

"She is quite attractive, I suppose."

"Not that kind of dating. Dating rocks. Radiometric dating. She knows all about carbon 14 dating; uses it in her work. That and tree rings and pottery styles. But C-fourteen's no good for the sort of things I deal with."

Teige's "hmpf" crossed the three second void while Bernie's soliloquy continued.

"Then the conversation got a little strange, if you don't mind my saying so. She asked how age could be 'simulated.' Isn't that weird? I thought it was an odd term to use. Why simulate age, unless you are falsifying a site? But the kind of sites she works on are brand spanking new compared to mine. Who can know?"

"You said it, Bernie. Who can know?" But Teige had a hunch he did.

It all became evident the next week. Cave number seven, on the central peak of Alphonsus crater, was easily accessible to the base, so Teige had saved it for his layover between Crisium and the farside trip to Tsiolkovsky. The cave was so close, and the survey anticipated to be so simple, that he had not requested his technicians to come along. His only companion would be the rover pilot, and she wasn't about to leave the cockpit unless she got overtime.

Somehow, his work had been less distracting since he and Clarisse had been corresponding electronically. There had been no time for phone calls, and the limited lunar vidnet was booked up anyway. The best news was that Clarisse was staying on for another lunar day. She would be leaving for Earth at the same time Teige would, and that meant a good week together at Alphonsus before they left. Just knowing that she would be around gave him new focus on his work. And despite his reservations, the electronic medium had energized their relationship. They had so much in common, and so much to share. But it would have to wait for just a little longer.

The cave entrance looked like a dozen other lunar lava tubes he had inspected. At first, Teige didn't see them. But then his helmet light drifted across something on the wall, a subtle cast shadow. He looked again.

There was something. It was vaguely geometric, and it had company. Across the wall, spanning a good thirty paces, spread the etched remains of symbols, some with faint color. They were soft, subtle, apparently worn away by the sheer force of time. And they were distinctive, unlike any other petroglyphs he had ever seen.

He brushed his hand across one. Its edge crumbled. A chill breeze drifted

up his spine and into the hairs on the back of his neck. It wasn't the environmental controls that were going crazy, it was him.

The glyphs were completely alien. But several gave the wall a context. One symbol was a circle with lines. The lines resembled paleo maps of a split Pangaea, two ancient Jurassic supercontinents inhabited by apatosaurs and tree ferns. Twenty feet further down, there were representations of another familiar form: the unique three-toed tracks of carnivorous dinosaurs.

There were, of course, no artifacts. That would have been too difficult. But Teige was sure that if the dyes within the wall glyphs had been dated, they would date to one hundred million years ago, or thereabouts. It was all wicked clever. And to what end?

Perhaps it was done just to see if it could be. Perhaps it was a finely crafted joke to be shared between two lovers. Surely it was not designed to fool the multitudes? He decided to tell no one. "It's a gift to me from Clarisse." As he left, he took a sample of the dye. Just for laughs.

Teige was grinning all afternoon. By the time he got back to his quarters his cheeks hurt. He left Clarisse a cryptic, smiley-face email—nothing else—and packed for the trip to Tsiolkovsky Crater.

Clarisse got the news in the early morning. Professor Kirk Teige's ship was missing on the far side. It had disappeared en route to the caves in the wall of Tsiolkovsky Crater. How he had wanted to go there, she thought. How excited he was to see the far side of the Moon, and to walk across a part of the lunar surface never seen by human explorers.

It was all too much. Her heart pounded and her eyes stung. For a highly organized type A person like her, she was feeling terribly helpless. Was anything being done? Surely they would search, and they would search soon. If she hurried . . .

She ran to the hub and found the transportation hangars. After a few poorly phrased questions and some fist pounding, she found the people she needed to. They were preparing a search & rescue craft.

"Who's in charge here?" she demanded of a short, rotund man with a cue-ball head and bushy eyebrows.

"That would be me. If you'll calm down I might be able to help you?"

"I want to be there," she told him. "I've studied maps of the area for quite some time," she lied, "and I know Teige." There was plenty of room in the search & rescue vehicle for her, the pilots, the medical team and a hundred potential victims. The missing craft had three. They took her. The little man was glad to see her go.

They were still a hundred miles out when they heard the faint voice of Kirk Teige. "To say that was a lousy landing would be an insult to crash dummies."

The pilot clicked his mike off and turned to Clarisse. "Keep him talking. It's important. I figure he has less than half an hour of air left. Depending on how active he's been over the last few hours, he may be suffering from hypoxia."

Clarisse spoke slowly into her comlink. "Kirk, I want you to keep talking to us. The pilot says we have your ship's distress beacon on scope and we'll be there in ten minutes. Just concentrate. Talk to me."

"Clarisse?"

"Yes?"

"I want to make love with you."

"Me too, but this is an open link. Let's talk about something else. Where are you?"

"Near the ship. I'm sitting in the sand against a big rock. In the shade. Not that it makes a difference in this suit. Just force of habit, I guess. I think I was thrown from the craft on impact, but I can move just fine. In fact, I went for a little walk."

"How are the others?" the pilot asked.

"Dead. It's terrible."

Clarisse took a long breath. "I'm sorry," she whispered. She doubted that Teige heard.

"Ask him about numbness," said the pilot. "Ask him if he's dizzy."

"How do you feel?" she urged.

Teige's voice was weak. "I . . . found something."

"Yes, I know, dear. It was stupid of me."

"No, Clarisse, listen. That was wonderful, in the Alphonsus cave. Our little secret. No, I found something *here*."

There was a silent pause as Clarisse processed the full weight of what he was saying. "What do you mean? No one has been there—you're the first."

"No, not me. Not us."

The pilot said, "He may be hallucinating. He doesn't have much air left. Keep him chatting."

"Keep talking, Kirk. Almost there."

"Clarisse, it's important. Don't you see? Ever since our Neanderthal cousins started thinking beyond their next meal, they were driven—we've all been driven—to explore. To see what's over the next . . ."

"Hill? Talk to me, professor."

"Hill, yes." His breathing was labored, but Clarisse knew they were nearly to him now.

"And it only makes sense. When you think of a greater good, a more noble cause, a higher reason, where do you look?"

Clarisse looked around at the blinking lights, the screens with miles ticking away, the lunar mountains passing by below. And she saw a thousand stars staring down at her, the glorious stars. "Up."

"Up!" he said triumphantly. "Yes, up. To the Moon, and someday the stars. And you were right about footprints. They last a billion years out here. If there are no. . ."

"Tourists," she finished for him.

The pilot shook his head. "He's in a bad way."

"No," Clarisse smiled, "I believe he is thinking quite clearly."

Teige's voice was clear now. "I see you, glimmering up in the sky, coming for me."

"Yes," Clarisse yelled, "I see you too!"

"I should tell you something else before you get here."

"Yes, my love?"

"These footprints out here. They have three toes." O

—The author wishes to thank his friends at
NASA/Ames, especially Chris McKay, for the genesis of this story.

GOD'S BREATH

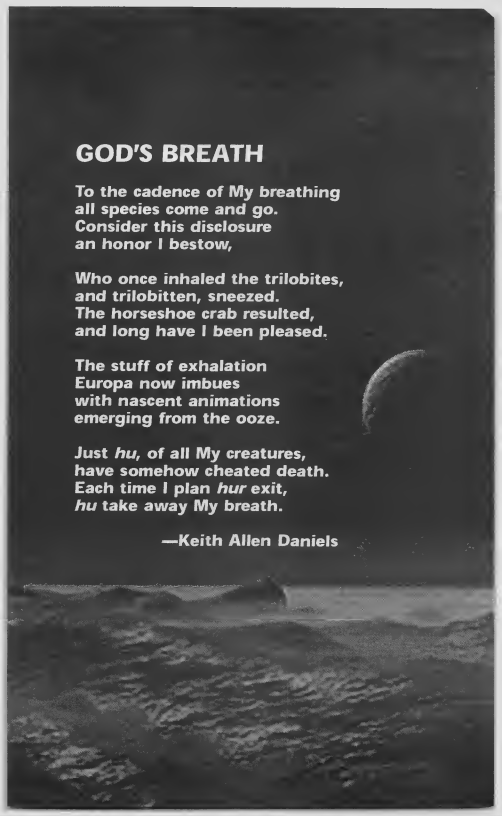
To the cadence of My breathing
all species come and go.
Consider this disclosure
an honor I bestow,

Who once inhaled the trilobites,
and trilobitten, sneezed.
The horseshoe crab resulted,
and long have I been pleased.

The stuff of exhalation
Europa now imbues
with nascent animations
emerging from the ooze.

Just *hu*, of all My creatures,
have somehow cheated death.
Each time I plan *hur* exit,
hu take away My breath.

—Keith Allen Daniels



Ian R. MacLeod

CHITY BANG BANG

Inspiration for this story came from a number of different sources including the novel and movie of a similar name and Norman Mailer's *The Naked and the Dead*. A book about soldiers returning from the Second World War, and how odd it felt for everyone, and "Home at Last" by Steely Dan contributed to it as well. "The whole returning but not returning is a theme of mine, and readers might like to think of this tale as a companion piece to 'Swimmers Beneath the Skin' (Asimov's, October 1996), which is set in a comparable warzone."

Illustration by David M. Allen





Weeks now, he'd been traveling.

Down from the airport, down from the SOC, down, his head still spinning, from the highs of battle and the lows of the holding camp that came after. Standing inside in the rain that flooded the concourse: him, the walking wounded, men from other regiments, with rain streaking the busted windows of the old duty-frees and rain waterfalling down the escalators, rain skittering and splashing on the tiles. Somehow the rain seemed thinner outside without a roof to fall through, and, then magically, an old diesel bus was there, chuffing and waiting as if to schedule. Surly questions and directions after these weeks of travel, and what sounded, in its phlegmy cussedness, like the first, real, local, voice: a touch of old England. Jolting and jarring, bits of highway and bits of old road filling in where the spans had been eaten by that stuff, the concrete virus they were always warning about at SOC without him ever actually coming across any. But it was here all right. Back home.

Slow journey north. Smoke of evening in the fading rain, the fading towns and houses. With the roadsigns mostly torn down, there seemed no way of telling, but men lumped themselves from the bus when it stopped as if they knew they had to get off somewhere, dragging their kitbags down the awkward space. Looking back, the soldier saw them all standing at the roadside, watching the bus lights fade.

Bumping through the night, his head knocking the black window. Weeks now. Old Jupiters. Gunships and Boeings. Not exactly running, not exactly fleeing. And not capture, either. Not capitulation. Not *defeat*, right? Not at home to *that* bastard. Not capture, but reassignment, demilitarization. That holding camp. Merely a change of policy, just in the way that the peace-keeping area had become the demilitarized zone and then became the Scene of Conflict—the SOC—and the SOC became the area of negotiation, which became New Sector B. New deal, and a new definition of victory. But always, even up above the clouds, it seemed to be raining. Drumming on his head. Potholes and wafts of daylight, the tooth-aching buzz of an engine.

"This is it."

He tensed himself.

The driver's face close to his, bellowing.

"This is where you said, soldier, isn't it?"

Looked outside, seeing nothing, soldier felt for his kitbag, dragged it out. He stood on the roadside, watching the bus lights streaking, fading through the rain. Above him, a lamppost; affixed to it, a sign and still even a timetable. Into town and out of town, memories of cheap days and cheap returns and the plastic sweat of morning offices where Ginny had worked part time to help pay off their new car when she wasn't taking care of little Jobie, although the streets this late were mostly empty; darkness was in the houses. This was it, he supposed, the place he had said he wanted to come back to. Home. Soldier, he half-recognized the street names. An old woman walking two dogs in pink fluorescent joggers muttering something that sounded angry, obscene, as she passed him. Two lads, in baseball caps, crossed over at a vulpine lope when they saw him coming.

He stood outside the house, almost sure now—although it was dark like all the other houses. Then, like an old trick in an old film, its widows blossomed on, and the rain yellowed as the whole street ignited. Two hours of power, daily. Soldier cringed. Dogs barked. Exposed like this, half his brain skittering off between the dustbins, waiting for the signals from his suit,

calculating angles of approach, factors of risk and opportunity, fields of fire. He held his ground. The short stretch of tarmac on the drive, he saw, was coming up badly and needed doing. But then, it always had. Couldn't blame that on any virus. The bit of lawn needed mowing. He walked up to the front door and thought, for a stupid moment, of feeling for his key, then pressed the doorbell, although he didn't expect it to ring even now that the power was on. But it did ring, *ding dong*, like one of those sitcoms where applause used to erupt when the guest star waltzed in; another, quite different, age. He'd forgotten that it ran on batteries, that doorbell he'd fitted himself in a spot of DIY, and he took it as a good sign as a figure loomed through the doorglass, then paused a short distance away.

"Is that you? Is that you *really*?" A voice, muffled through the wavery doorglass. The figure was underwater, floating.

"It's me."

The figure rose toward the surface, struggling to be defined.

And the door swept back, and soldier was diving in before he knew it, home before he'd realized. And it was just like they said in debriefing. A new Zone. A different Sector. Everything tight. All the angles. He stood there, soldier, dripping, his heavy bag beside him, waiting for his old self to wander out from the kitchen, screwdriver in hand and in the process of fixing something, and ask him just what the hell he thought he was doing. And looking at Ginny. Who had and hadn't changed.

"We had an idea they were releasing you, but there was no message." A cheap nylon dressing gown, pink and from a catalogue, which she still wearing this late in the day. Hair a sleepy mess as she pushed her hands through it. But she'd done her nails.

"There never is, is there? Look—I'm sorry, the whole thing's a mess. There were no proper arrangements."

"Don't apologize. Dar . . ." A word not finished. And that hair again. These hands, the sound of them that he'd missed without realizing as they plowed gold and ashen hair. Above the smell of the carpets, the smells he'd brought in with him from the bus and the rain and his suit and his kitbag, Ginny was warm and buttery, ripe bread fresh from some yeasty oven. "Let's just take what there is, shall we?" She gave him a crooked Ginny kiss, a crooked Ginny smile. "You're back. That's what's important." A smell of cigarettes.

"You gave up smoking. You told me."

Her hands lingering for a moment on the collar of his suit, toying with a loose strand of fiberoptic. Those red nails. "Well, soldier, it hasn't all been roses here, either. I had to start again."

She worked at the kitchen microwave before the crunchout, while they still had the power. She opened the freezer, which she now used as a kind of pantry, and took out a carton, which popped and bubbled as it heated, and tasted just like brown combat food when he ate it. It was on the tip of his tongue. The name of that particular ration. He could almost remember it.

"Where's Jobie?"

"Jobie's out. He's older now. You'll see when he comes in."

Those kids in the baseball caps. Vulpine.

"So what does he get up to?"

Ginny shrugged, leaning against the kitchen counter. "The same things kids of his age always get up to. Just don't . . ."

"Don't what?"

"Don't come over like the big sergeant major." Ginny scowled at herself,

and waved away the words. Her manner, her red fingertips through her hair. He guessed that she was itching for a cigarette. He wanted to start smoking himself, just for her. "I know it's been hard for you. I know it must have been. They try to keep it out of the papers—it's not exactly censorship, it never is in this country. But they never quite *tell* you either, do they? What I'm trying to say is that I have an idea, but I don't *know*. Those holding camps you were in . . ."

"It rained a lot there as well." He was staring at the table, the globs of candlewax. And the tin tray of the stuff she'd fixed for him, ticking gently as it cooled like a car's motor, or the barrel of a gun. He was hungry for something, was the soldier, but he didn't know what. The rain on the kitchen window, and a back garden out there that probably needed doing at least as much as the front. And this food, which was on the tip of his tongue. Cold and scalding. He couldn't finish it.

Ginny pushed herself up. She rustled beside him. "What I'm really saying is that I know it's going to be difficult for both of us. We've lived through this war in such different ways. And neither of us ever thought it would be like this when you came back from it." Pink catalogue nylon snagging on the stubble of his cheek, on the broken scraps of fiber optic and the piezoelectric filaments of his suit. Hands on his shoulders, on his neck. "We all expected victory." The dig of those nails, which she'd painted red for him even though she hadn't known he was coming. He hated that: when you couldn't see someone, when you couldn't do a thing about it and they were right behind you.

Then the lights went out again, which was called the crunchout, as the power stations strained to light some other part of the country, and Jobie came home from wherever. The soldier, he really didn't have a right image of Jobie, he didn't know what to expect. But his son was dry when he came in from the night, which was the strange thing; his son was dry even though it was still raining. And *little* Jobie, soldier realized now, who really hadn't grown at all, by the look of him. Jobie, who in fact hadn't changed one tiny bit, and whose voice as still as choirboy sweet and high as it had always been. They studied each other, wary as cats, in the crunchout candlelight of the narrow hall, with the underwater rain sheeting on the black glass outside; son and soldier. Black hair a fluffy fringe, scuffed Nikes, a Nintendo Super Mario T-shirt. This was Jobie. *Goodbye, Daddy*. And the hug he'd given him when he'd went. The soldier could see it now, that day back at the airport, when it still had a roof on it. Flags waving. Car horns. A day of popcorn and sunlight. An outdoor movie. *And good luck*. . . . Not that anyone had thought that he needed it, then. But, apart from the candlelight, the crunchout rain, this new situation and Sector, it was the same Jobie. Nothing had changed, even down to those clothes he was wearing. They both stared at that heavy kitbag he'd brought home, son and soldier, both wishing it contained some kind of present. Not that they gave out souvenirs at the holding camp. Not that soldier would have wanted any.

"Quite a few of the kids are smaller now. . . ." Ginny said later as she lay with soldier in bed. "A lot of the food industries went down. Bankrupted supermarkets. Then there was the scare about CJ3, then anthrax, then the minx. Nobody ever starved, but you didn't know what the hell to give them." She chuckled, hands in her hair, smoking. "Ten years of pizza and chips and chicken nuggets, then suddenly it's reconstituted lentils and powdered milk from some lost EU mountain. They went hollow, a lot of them, from the

shock of it. Spoilt. Ghost kids. It was in the papers. Remember—when we thought they were all going to be selfish giants?" She rolled over to touch him. A cigarette's glowing light. Fingers that were painted. "But he's fine. It'll all be fine. You'll see."

Soldier kept himself loose, relaxed. He'd washed, shaved, in the nearly warm water she'd brought up to the bathroom in buckets from a new hand-pump that had been added to the boiler downstairs in the kitchen. It was a good feeling. And soldier's dressing gown had been hanging there on the back of the door when he'd turned without thinking to reach for it. Bits of fresh fluff in the pocket, a ticket stub with a date on it he couldn't possibly recognize.

Ginny's hands were circling. She ground out her cigarette, made a shrugging motion in her nightie. She was naked.

"There's no hurry on this front," she was saying. "A magazine I read last week when I was queuing for something said how difficult it can be." She chuckled. His pajamas, clean and fresh as if washed yesterday, rode up. Her skin stuck and unstuck to him. "We're like two new lovers, which can't be so bad, can it? I dunno, though, can you remember?"

"Can you?"

"Yes, I remember," Ginny said. "I remember this, and this. . . ." She counted his parts: the eyes, the mouth, the nipples, the navel, the balls, the prick, the fingers, running an inventory. The soldier thought of his kitbag downstairs, which he'd told her, his voice calm, controlled, easy as anything, to leave till the morning. Even then, he decided, he wouldn't want her to touch it. Your own kit was your own responsibility, always. They drummed that into you. "And I remember how you liked . . ."

She slid down and loosened his pajamas. Her mouth was on him. Had she done that, ever? Or at least, this easily? And did the soldier like it? Should he? Her cold tongue, lapping at nothing?

"Or we can wait," Ginny sighed, and turned over on her back, and went to sleep beside him.

Soldier lay listening to the rain.

Somewhere, he was sure, the flags were still waving. Somewhere, there was bound to have been a victory. It stood to reason. Might and right and technology. Smart bombs, smart infantry, weapons from ships flaring into the night like beautiful fireworks. He'd urged it on himself, watching TV, enjoying the show like everyone else, cheering and jeering like it was a football match while he drank beer with all the other lads who couldn't wait to get in it. Wasn't this, after all, the thing for which they were paid? King and country. These freaky foreign colonels you saw sitting at their foreign bunker desks in their cartoon uniforms were creatures from a different age, villains out of Shakespeare. They deserved a smashing, to be taught a lesson by the West. A blight on your houses, Sire! An end to such villainy! God for Harry, Sirrah! Maybe, of course, the first troops went in too early after the air phase, and wore UN blue helmets when they should have gone for battle green. The battle had hotted up when it should have been cooling. But even the military believed their own stories, and that a few extra battalions would finish the job in that foreign place. The military always believed their own stories. That was the point of the military.

He'd still been at home, the soldier reckoned, when the first major international bank went down—figures and zeros melting in the way that

there'd been all the nonsense about at the millennium. But this time, it *really happened*. Stocks and equities gone in a puff of electrons. Whoosh, whoosh, like invisible fireworks, up in the digital night. The war had turned dirty. There were hackers, cyber mercenaries who didn't give a bugger about whose side they were on, or whether there was a war, or what country they were in or what planet they were on, for that matter. And there were madmen who were happy to board holiday planes with bombs stuffed up their asses—the total and exact opposite, surely, of the smart weapon. Death instead of a tan in Majorca. A different kind of trip. There were madmen, it turned out, *everywhere*. Just waiting. All you ever needed to do was point the weapon, pull the trigger, find the excuse. A dog went into a Sainsbury's supermarket and exploded. Fifteen dead, the freezers dripping. Woof woof. Bang bang. Women screaming. Limbs amid the coldcuts. The punchline of some dreadful joke.

But somewhere, the soldier was sure, the flags were still waving. It stood to reason.

"Who's Katin?"

"Katin?"

"Or Cutin. I don't know. You were saying it in your sleep. Or perhaps you were just swearing."

"I don't swear."

"Not when I'm around anyway." Ginny opened a can of something she'd taken from a cupboard with a door that needed fixing. It was the first time he'd seen her fully dressed. Jumper and a skirt. New and blue and pretty. Her back was to him. It was morning. "But don't soldiers always swear?"

"I don't swear. Never."

"Okay, okay, darling. It was just something you said. Catin or Kutin. Something like that."

"It was a place, I think."

"A place?" Her hand with a spoon over a bowl. Some brown gloop he knew he probably couldn't eat was quivering. "You *think*?"

"Close to where I was kept. You know—the holding camp. Before they released us."

"But you're not sure?"

"Should I be?" A remote part of him thought about getting angry. Wondered about banging the table, and whether by doing so he probably wouldn't just break it and then need to fix it himself. "Please don't ask me questions like that, Ginny. It's hard when I'm pressed."

"I'm sorry."

"No. I'm sorry."

The food, the brown gloop, it tasted of shit—the punchline of some dreadful joke—but literally, when he put it in the mouth, after she'd placed it on the table. Soldier, he just couldn't swallow it.

That same car that Ginny had worked for part time when Jobie was at nursery was still waiting in the garage. Ginny made a joke about the holes and the rotted sills and the wires she had to touch to get it started. Said it was Chitty Bang Bang now and they had to keep poor Chitty out of the rain. But the weather was grey skies that morning, good ops weather, little chance of precipitation, and the soldier looked out through the window, which was jammed up half way, at the shining bungalows and the crappy

houses. Ginny said Chitty Bang Bang ran on chickenshit now, which was a joke that meant methane. It all smelled like farts to him.

They bumped along the roads, rode up once or twice across what was left of the pavement. Soldier kept himself easy and alert. Operations weather. But daylight, he'd always felt, personally, was worse than darkness. In theory, a modern gunsight could acquire and keep a target though most conditions—*fire and forget* the saying was—and a modern satellite, hijacked by some hacker, could see though just about anything. His suit, had he been wearing it now, would have alerted the soldier to interrogation by radar, or the warm dull spot of a laser beam. But only the back of his neck, his soldier's sense, could warn him that he was being watched by hostile eyes. And the ragamuffin troops he'd been fighting in the Scene of Conflict, the SOC, they often forgot to take proper care of their equipment in any case, and they liked to see who they killed, the way the blood sprayed. Darkness—which was the precise opposite of where soldier was now, exposed to the busy hillsides, endless opportunities and angles, in this slow and stinking vehicle—was where soldier always felt more safe. He missed the combat suit he'd come back in, even if the shiver at his neck, the sense he really needed in daylight, was still there. He hadn't worn the jeans he had on for years, and there was a gap where his old belly should have been. He didn't even recognize this shirt he was wearing. The cut was strange. He felt in the flaps of the top pockets. There was nothing.

"What are you looking for?"

"I was just wondering."

"Wondering what?" But Ginny was busy with the task of driving, and she drove now the same way the civilians did back in the SOC, elbows out, butt in mouth, eyes everywhere for fresh hostilities or landmines, veering across the good bits of road with those newly painted hands, honking the horn at any idiots who got in the way. A big truck lumbered past sometimes. Each one seemed the same. A few half tracks and tanks, in case of riots. There were tented encampments on the roadside. And Jobie was so quiet in the back that the soldier had to look around to remember him. Nikes and that Super Mario T-shirt and no sign of any outward change from the lad who'd ridden in the back of this same car with the salesman when Chitty had still been covered in the manufacturer's plastic sheeting and the odometer had read 000003 and it had smelled new in every possible way. Jolting around on the bits of an old foam mattress in this once-lovely car that now smelled of shit and ran on chickens. Our Jobie. Shitty Chitty. Curtin. Katin. *Karten*. Like swearing.

"Shopping first, then a McDonald's. How does that sound, darling?"

Darling? "It sounds great."

"We call this bit the roller-coaster, don't we, Jobie?"

A bridge had collapsed, and you had to ride across in worn and rain-runneled tracks. Ginny made a whoopee sound, but Jobie stayed quiet in the back and the soldier's stomach lurched, neither full nor empty. It was just a big hill of concrete. There could have been foxholes, underneath.

What she'd said last night, about there being no censorship but you never really *knowing*, had been right, the soldier decided. In the SOC, when there still was an SOC, before it had been sub-divided by the peace treaty, they hadn't wanted to demotivate the fighting forces. Here in England, they hadn't wanted to demoralize the civvies. Still, you picked it up, put the pieces together in your own kind of puzzled way. You learned that the war

had been carried home, like some dreadful disease. You twiddled with your comms equipment on boring nights to catch the unauthorized channels and sites and interactives. Any dictator worth his salt these days could buy stuff off the shelf and under the counter that would have had Stalin drooling. Delivery systems weren't the problem. Only the big old powers with their big old democracies needed fancy missiles, those lovely fireworks. These days, thanks to a thousand airlines, any madman could take off in one part of the world and land in some other. Forget about the bomber—the tourist, the refugee, the businessman, would always get through. One suitcase, one vial, one condom in the belly, one bomb up some idiot's ass, and the dirty front line of this dirty war was everywhere. Boom, Boom. That dog in Sainsbury's. Holiday planes falling from the sky in flames. The first bank that went under. Whoosh. Whee. And that was just the beginning.

Somewhere, the soldier was sure, the flags were still waving. Somewhere, there was bound to have been a victory. But not here. The concrete cancer, a new type of crystal that thrived and grew stupidly on mineral salts. The thing that had happened to the cattle, which even now, as far as the soldier knew, no one was quite sure whether to put down to some newly cooked prion, or just a fresh twist to good old new variant BSE. The green gunk that had filled all the reservoirs in Wales. A single suitcase, and a huge magnetic pulse rippled across the Financial Mile, frying every disk and circuit—pacemakers and implants, too: a lot of people had died. A crippled power network. And the random stuff, which was always the worst. The defense minister, kidnapped, crucified live on the internet. The semi-flu, and that scare about the false nurses with injections of HIV. Western life was too complicated, a frail butterfly, said the dictator in one of the speeches from his bunker. A frail gaudy butterfly whose wings could be plucked easily. Or had he said *fucked*? Did dictators swear? Huzzah! Sirrah! Chitty, bang bang. Boom, boom. Bang. Whoosh. Whee. Everything, through the daze and crackle, sounded like swearing.

An old Sainsbury's. Still some of the letters of the name above the doors. Still even a few wrecked shopping trolleys piled up outside as if they were mating. But inside, and in the parking lot, and spilling into the old loading bay, it was basically a car boot sale, or some kind of hippie market. Glas-tonbury without the fun or the music. They wandered past the old aisles, the twisted shelves, the stalls selling live chickens, dead rabbits, odd bits of carcass the soldier really wouldn't have wanted to name. Disgusting strands of sausages. Ginny, she'd brought some stuff of her own to sell. She had a line, she explained, opening Chitty Bang Bang's boot a little awkwardly, like an actor in a soap who suddenly has some new characteristic to explain, in plumbing equipment. I mean, Christ, even in the old days, you could never get a plumber when you needed one, right? And you were never any great shakes at DIY, darling. And now—

"I thought you didn't swear. You said Christ."

Ginny, plumbob in hand, let her arms droop. They both stared at the junk in the boot. Pipes and valves. Some new. Some rusty.

"I only said Christ, for Christ's sake!"

Jobie was staring. A dog wandered past, mangy and lost. Soldier tensed as it sniffed Jobie's leg. He tensed again as it loped on into the fizzing gaslit clamor of old Sainsbury's.

"Why don't we just go to McDonald's, eh?"

Soldier brightened. "I think I know where that is."

"It's changed. Everything here's changed. . . ."

But the old shopping center. Down the slope past what was left of the store fronts, the glass, the tiles, the butchered dummies. All the smells you'd expect down here. A dungeon. A cavern. And Ginny was wrong. McDonald's was where it had always been. Past the Mesozoic lake of the old car park, and a small encampment where several madwomen were singing. Lights, even. The sound and stink of a diesel generator. Still those golden arches.

Steam and kids inside. And tramps, and more of the madwomen, who were enjoying the echo and singing merrily. It smelled like an SOC soup kitchen to soldier, it smelled like the holding camp. They studied the chalk board. Hamburgers were off. Hamburgers, real red meat of any kind, so easily lethal, were off everywhere. But they still did Happy Meals, which meant a grease-stained paper bag with an old cracker toy in it. They sat down. Another tray of gloop for soldier. And soldier, in any case, didn't feel that hungry. He looked back at the big plaster clown that dominated the corner behind him. Not Ronald McDonald, but a creature that dimly reminded him of a book he'd read, or a film he'd seen. A horror movie. Its face. Leering. He thought about asking to change places. He tipped his Styrofoam cup to his mouth. The molded letters on the side said Diet Coke, but he knew flavored water purifier tablets when he tasted them. Meant the stuff was clean and safe, at least—probably safer than at home. Which was reassuring.

Jobie ate with relish. The relish was red. His T-shirt, the Nintendo one, was still fresh and new. His Nikes, when the soldier looked down at them, were shop-white, swinging there beneath the table.

"Of course," Ginny was saying through the waves of her cigarette. "This really isn't McDonald's. They've just kept the name, the ethos."

"Ethos?" Soldier smiled. Ginny wreathed in witchy smoke. Her red nails. Like those singing madwomen. He kept at it; the smile, the planned joke. Kept himself easy and relaxed and ready. "There you go again, swearing. . . ."

"I'm not. . . . I don't think . . ." Finally, for what little the joke was worth, she got it.

"Where, by the way, d'you get all that plumbing stuff?"

"Here and there, don't we, Jobie?"

Jobie, his mouth a red mask, looked blankly back at Ginny.

"And then you had that handpump done as well. I mean, the thing back in the house on the boiler." The soldier studied his food, brown in its tinfoil tray, topped with an ooze of hemorrhoidal red. His gorge started to rise. "Did you have that done yourself? Did you get somebody in to do it?"

"It was a bit of both, as I remember. You've seen what it's like. You have to sort of mix and match." Ginny mashed out her cigarette amid the burns in the middle of the table. "And why all these questions? And why can't I say Christ occasionally? I can say *fuck* if I want to as well. . . . I can sing and shout and scream and wave my tits in the air just like those batty women!"

"I suppose you blame me."

"I don't blame you for anything. God!"

This really wasn't a scene, soldier told himself. You sometimes had to send out scouts, hostages to fortune. Sure, they often came back mangled, their pricks in their mouths. But this was war after all, wasn't it?

"But we *lost*, didn't we?" he said. "I mean, it's understandable to feel let down. I'd rather hear you say it. When we went away, it was just the start

of another one of those wars you see on the TV screen. That was how it felt, like you were stepping onto TV, like you were Mel Gibson—"Who's . . . Jobie began. But soldier was out on patrol, in the SOC. A prick with a mouth. He continued. "—nobody expects to lose anymore, do they? I mean *this*." He gestured at not-Ronald McDonald leering behind him. "Perhaps we should have gone out earlier. Perhaps it was always coming. Perhaps it was just global warming."

"What's—"

"Believe me," Ginny said slowly, heavily, banging her hand on the table as if she was hitting a car horn. "We're just glad you're back. There's no big disappointment."

"I was only saying it would be reasonable to—"

"—well, it's *not*, is it? *Nothing's* bloody reasonable!"

"And I think I should tell you, too, Ginny, that a lot of us over there felt that the defeat, the whole thing, came . . ." Soldier trailed off. It really didn't need saying, that they felt let down by the people here at home, and that the politicians and the generals had caved in because the poor old civvies couldn't take it. That the war had been lost not *there*, but *here*, just because there had been a few power cuts, just because of a dog or two in Sainsbury's. It really didn't need saying. The whole conversation, who they were and what they wanted to be, this stinking place where the food stank, it was sliding away from him.

"Aren't you going to finish your food?"

Soldier wasn't sure if she mean him or Jobie.

They both shook their heads anyway.

On the way back home, across the foxhole bridge, they had a go at the song that went with the car. Dick Van Dyke and the woman who wasn't quite Julie Andrews but definitely should have been.

Chitty spread her wings for them and bumped up through the air.

The power came on that night. It did every night, Ginny said, except Wednesdays and alternate Saturdays, and, of course, Sundays, when the whole system was down so they could have another bash at figuring out what was basically wrong with it. It was something to look forward to, the electricity.

Jobie was in his room. Soldier could hear him, clicking the keys of his PC. He hovered on the landing in the new electric darkness, wondering about knocking, wondering about lines of fire. First, of course, you chucked in a grenade, or noise bomb if it was civilians. Which was ridiculous. He gave the door handle a savage twist. Jobie was there at his desk, beneath his old Manchester United posters, which had crinkled and aged in a way that he hadn't. Where were they now, Becks and Giggsy? But Jobie was on the net, making the most of the opportunity. The screen, his face mirrored in it, was glowing.

"Just thought I'd look in. See how you're doing."

Soldier looked around for a chair. Knocked some clothes off one. Raked it over. It was small like Jobie, and creaked with soldier's weight.

"Looking for anything special?"

"Just the usual. I was looking for this, actually." Jobie touched his T-shirt. Nintendo. Super Mario. His hands were trembling. "You know, seeing if he was still around somewhere. Toward the end, they used to make some radical stuff."

"Was it compatible?"

"Don't you remember? You jinxed the PC to take it. Dropped some solder just here." A glob on the desk. Dusty silver candlewax.

Soldier kept in his amazement. That Jobie should remember these things. That *he* shouldn't. Still, it was the sort of trick soldier might have done. Touch of the DIYs, and well within his capabilities. Piddling with the PC. Unlike that clever handpump on the boiler at the back of the kitchen.

"D'you use *this*?"

It was a glove behind the back of the screen. Motion sensors and fiber optics. Old, like soldier's combat suit, and, soldier hoped, similarly busted.

"Sometimes, I . . . well, I used to."

Jobie's eyes traveled back to the screen. It was a fake site, soldier realized, a fake Super Mario, like that fake clown at not-McDonald's. Jobie was downloading something. Mario was winking, beckoning, leering, grabbing at his crotch in the manner that Michael Jackson had used to, back in the age of Becks and Giggsy.

"Are you sure this site is . . . well, okay?"

Soldier, he'd specialized in communications. It was comms, really, even before he'd signed for King and Country. Comms at school—or networking, or whatever else they chose to name it. Joining, linking, getting inanimate electrics to talk to each other. And it would still have been comms, or so soldier had imagined, after he'd finished his commission. But he'd liked the idea of getting his hands on some top spec military hardware first, and then using it for something a bit more thrilling than linking up hotel databases. And a spot of military service always looked good on the resumé, right? Showed you had balls. Touch of the old Mel Gibsons. Who knew where it would lead to—stepping into the TV screen? Fun, mostly. Certainly not this.

Downloading. Mario leering. Soldier, he could have e-mailed Jobie from the SOC and kept up a kind of friendship, but he'd made it his firm policy not to. A colleague in another regiment—and this was, as far as soldier could verify, a totally true story—had had, unbeknown to him, a virus encrypted in one of his messages home that had traveled into the house maintenance systems. It shut the air vents on the heater in the bedrooms as his wife and three kids slept one night. Carbon monoxide: killed the whole lot of them. And there were stories, too, about viruses that could override the power supply and frazzle your PC and you in the process. Smoking ruin—which soldier really wasn't sure was feasible, but then, he really didn't want to have a grim message from Regiment Welfare about Jobie as his way of finding out. There were even viruses that could take over interactive gloves like these, and the whole-body VR swimsuits, get the tiny motors that simulated response and movement jiggled up way beyond full power for a few moments and twist you up real badly. He'd heard that had happened, or something similar, with guys in a certain early variant of the new interactive combat suits out in the SOC. Their bones torn and wrenched sideways as the thing was taken over by some nightmare virus, twisted in all the wrong angles like one of those rubber and wire dolls. Only blood pouring out of them, and no way of bending them straight, not even in their coffins.

Boom.

"It's *safe* . . ." Jobie sighed a patient sigh. Where to begin? He was just like soldier. Loved tinkering. And how many years had he been doing this kind of thing? So why worry about this one night, about Super Mario and Nintendo? Why worry about anything?

Soldier put the glove back down with scarcely a shudder. It was broken anyway, genuinely old and dusty. And it didn't look booby-trapped, had none of the tell-tales. It looked almost safe.

"I've missed you, son."

"I've missed you, Daddy."

Downloading.

"Can't you turn that thing off?"

"It's nearly finished. It's just a patch. And we've only got . . ." Jobie's eyes, which were brown as a doe's, traveled. "Ten minutes before it crunches out."

"Crunches out?"

"The power, Daddy."

"Did you think about me much when I was away?"

"Lots. I sometimes used to hear you—"

"—Hear me? Where?"

"Nowhere. Just downstairs, I mean a man's voice in the lounge, and in the kitchen. I liked to think that you were sorting things out down there. It was like . . ." Jobie's words slowed. ". . . like downstairs was the SOC. And upstairs was here in England and you were busy protecting me."

"What sort of things was I doing?"

"I dunno. Just fixing things."

"Like that pump on the boiler?"

Jobie looked at him.

"Did I ever come upstairs, Jobie? Did you ever hear me through the wall upstairs with Mummy?"

Mario bleeped. He made a final half-hearted pelvic thrust, then vanished.

Jobie's eyes traveled. Becks. Giggys. Anywhere but soldier. "Not really."

There was a figure out in the back garden next morning, twitching and swaying through the thick nettles. Soldier burst out through the rotted kitchen door, then just stood there, heart hammering. His combat suit was hanging on the washing line.

"I couldn't just leave it around the house," Ginny said. "Could I?"

"You should've asked."

"It's *my* house, I don't need to ask per—" She took a breath. Her hands plowed her hair. They were standing in the long grass. Soldier's feet were bare. "What I mean, darling, is that it can't just lie around the place, can it?"

"Just let me know. All this stuff, it's part of me. Just let me know. Okay?"

"And that kitbag in the hall. It's so heavy I can't even lift it. Or is it stuck to the floor somehow? And it stinks as well. How do you think it is for Jobie? This big man he can hardly recognize taking over the house, filling everything."

"Don't say that. Of course he knows me. I was chatting to him just last night."

"Yes," Ginny nodded. "I heard you *chatting*. And I should think the whole bloody neighborhood can hear you *now* as well. You shout as if you're still on some fucking parade ground. You're shouting *now*. You shout even when you're not angry!"

"I'm *not* angry. I'm just . . ."

Soldier looked at the skies, at the collapsing trellises and fences, at the wild wet roses that desperately needed pruning. Then at his wife, in that pink nylon nightie. For the first time, he felt a glimmer of lust. It was a beautiful, beautiful morning.

"... I'm just not angry, okay? And I'll try to keep my voice down in future."

They sat in the lounge together later in the morning, after Jobie had gone out. They talked. Ginny smoked. Soldier kept his voice down. He was relaxed. At ease. They sat on the separate armchairs instead of on the sofa. This was a part of the coming down process he'd been told about. It was the time for negotiation.

"I'll be honest with you," Ginny said. "I tried opening that bag of yours as well as simply lifting it. That lock you've got on the zipper's incredible. I even tried getting a knife from the kitchen and cutting the damn thing open at the sides. God knows what it's made of, that fabric—" Her eyes cringed in a waft of smoke. "—metal of some sort?"

"It's just meant to be secure. I told you. It's my kit and I'm responsible for it."

"But you're not in the army now. Or at least you're not getting paid, are you? No one's getting paid for anything. I know it's early days, darling, but you're going to have to start putting these things aside. That can't really start to happen, can it, with a huge smelly immovable black bloody bag stuck out in the hall where we can all fall over it?"

"I suppose you're right," soldier conceded. "I just need time."

"And you know what you were saying yesterday, in McDonald's, darling? What you were saying about it all being *our* fault over here for not taking what you probably still think are minor inconveniences."

"I hardly said anything."

"Whatever. I'm glad you said it. Because *I've* got something to say too. It's on my mind and I know I need to say or else it will always be there and sort of festering—"

"—Ginny, I can forgive—"

"—It's *not* a question of forgiveness! For Christ's sake, darling, what have I done that needs *your* forgiveness?" It was definitely her who was shouting now. Soldier was almost sure of it, although his head felt as if it was underwater and his ears were booming. She lit another cigarette with those hands of hers that could now do anything, sell plumbing, drive a car like an SOC truck driver. She put the cigarette to her mouth and drew on it slowly. She, too, the soldier guessed, was waiting for her world to stop spinning. "What I have to say to you is that there have been stories—and I know there are *always* stories, but a friend of mine even saw a government leaflet about it at the Post Office—stories, I mean, about returning soldiers. About how . . . well, how it's like they're a sort of virus themselves that the enemy is slowly releasing home. Like—I don't know, there isn't any nice word for it—sort of human time bombs, human viruses. That sort of thing. Just some of them."

"You mean like the dogs?"

"Dogs?" Her eyes traveled from him. She rolled them and sighed. Soldiers! "I don't know anything about *dogs*, darling. And it's *not you* that I'm saying this about, if you can see what I mean. I guess I'm really thinking of the neighbors, and of Jobie. And that fucking immovable bag in the bloody fucking bloody shitting hall—" Like a trooper, her swearing was, but her voice remained calm, controlled, easy. This, soldier realized, was how she'd probably talked herself through those days when she'd been alone. It was how she'd got over and around all the hassles and difficulties. The loss of Sainsbury's "—that bag, and that ghastly suit. It all has to go, and the soon-

er the better. We're all jittery and afraid, basically, darling. Worried what you're all bringing back with you. Worried that that bastard in his bunker hasn't finished with us yet. That it really hasn't ended. And I know I've said this badly. . . ."

"I understand."

"You do?"

Her mouth on him, that first night. At least she hadn't thought that he'd brought the clap back with him, or HIV. But that was different soldiers, different wars.

"Of course I understand," soldier said. "And I'm glad you've said it. We're both bound to have our worries." Soldier looked around at the front room for a moment. It was the first time he'd really noticed it. The sofa was covered in snail's trails of silver duct tape. The TV screen had a crack in it. The fire had been ripped out from the wall in some botched repair—or more likely, the soldier decided, a half-finished job that had been suddenly interrupted. There was a screwdriver someone had left on the shelf above, signs of recent activity. It had been a gas fire. Was there gas now? Wasn't it gas, in fact, that he was now smelling? Or was it the drains, or was it him, or his kitbag in the hall, or the residue of another foul breakfast that had left him, frankly, feeling sick and disgusted? Or was it Chitty Bang Bang in the garage, clucking to herself and feeding on chickenshit?

And the screwdriver wasn't his. Spot of DIY. Wasn't *his*. He was sure of it.

"Does Jobie still go to school?"

"Yes. Mostly."

"Mostly?"

She gave a civilian shrug. Fuck you. Search me. "There's a shortage of teachers and equipment, so it's done on an on-off basis. It's where he is now, though. Didn't he tell you that when he went out? Didn't you ask him?"

"What year's he in?"

"All the years are pretty much combined."

"He seems so—"

"—So what?"

"He seems unchanged."

"That's good, isn't it?"

"I mean, he's smaller than I expected."

"He's just at that age, darling. They get stuck for a year or two. Then they rocket up. You should see some of his friends. Like ghosts and giants."

"That T-shirt he keeps wearing."

"He can wear anything he likes, can't he? It doesn't all have to be uniforms. And why are you asking me all these questions?"

Soldier shrugged. They were downstairs, in a different SOC, which for Jobie had been this room and the kitchen. Jobie, he had heard a man down here at night, about while soldier was away. Fixing things. Protecting him. "It's like you say, Ginny. You sometimes get sick of questions."

"But now's the time, isn't it? Didn't I tell you about that article I read, and about things festering? So fire away." Spilling ash, she sat back in her chair, sunlight behind her. Birdsong. Those red nails. The whole beautiful morning. "Just ask me anything, darling."

But the questions just hung there, like the smell of farts or gas; they slowly pervaded the morning and took over the afternoon wholesale. Sol-

dier, he was violently sick in the toilet, which involved a whole palaver of plungers and buckets he hadn't realized they'd had. He stood in Jobie's room after with the window open, trying to suppress the retching. He stared down at the dark figure of the combat suit, that was hanging from the line with its head off, as if it had been tortured. Then Jobie came home from school, and soldier retreated to the lounge again, and sat alone in the same chair he'd faced Ginny from that morning. He was waiting for the power to come, waiting for the light, although he was dreading the food that would come with it. But it was a Wednesday. They went to bed early and in candlelight.

Soldier was swallowing hard. Soldier was trying to see stars though the bedroom ceiling.

"Ginny . . ."

"What?"

"You haven't asked me about what happened in the holding camp."

"D'you really want to talk about it now?" Her voice was slurred. She was half asleep already.

"Not really."

There hadn't been a battle, or any obvious defeat—not for this soldier, anyway. As far as he could tell, it had all been going pretty swimmingly until the order to jack it in, to report to the same enemy who'd recently had the heads of some other members of his regiment up on poles for target practice, came down the comms. But it was an order. And orders were orders. And what soldier could tell, personally, about what was happening in the SOC, meant nothing—in fact jackshit, if you felt like swearing. So down the road he went to the holding camp. He kept his combat suit but he handed in his kitbag. Did this soldier.

A kind of reunion, really. Reunion without the piss-up or the crap speeches from the generals. Reunion in the foreign mud and in the tents and in the rain. But they were mostly happy really, or at least not discontent, were these soldiers: digging latrines and getting properly orientated and organized as if they were back in basic bloody training. They were sorted into units, given grey postcards to send home that, Ginny, now this soldier thought of it, hadn't mentioned receiving. You rarely saw the enemy, who were outside the wire, and at the gate. Negotiations were going on, EU, UN, US, NATO, and the orders right down from the very top were not to fuck it up with stupid insurrections and escape attempts, to forget Steve McQueen and Mel Gibson and keep it all sweet and neat and orderly. They took pride, really, that they could organize themselves, be virtually their own prisoners, did these soldiers. The whole thing was an advert for the Geneva fucking Convention. Soldier, he was floating on the foreign rain, the foreign mud, freezing in his damp combat suit. Although he was missing his kitbag. But he wasn't in any mood to let things worry him. He wasn't in any mood at all. Until—who, what was it?

Curtin.

Katin.

Karten.

Until then.

What soldier really wanted for Jobie was to give him a treat, to take him out somewhere. Were there still Pizza Huts? Was the multiplex on the bypass between the garden center and Do It All still open? Ginny just laughed

at him over her breakfast, her mouth full of brownstuff, and waved those painted nails, which were too long, surely, for doing anything as practical as handling and selling plumbing equipment. Laughed as if he'd said something at last that was really witty. The kitchen door was wrecked where, yesterday, he'd rushed out through it as if all the guns of hell were sounding after him to stare at his combat suit dripping on the washing line. He'd need to get his finger out, would soldier. Spot of the old DIY. Sort the place out. The whole fucking bloody house was collapsing. Just like Ginny had muttered to him from her dreams last night as he lay awake beside her.

Then he was alone, first time. Alone in the house, the new SOC. Ginny was off somewhere doing something, and he hadn't quite wanted to question her because she'd probably told him already. Jobie was at school again. Soldier, he was loose and empty. Soldier, he was prowling. He turned the light switches off and on, liking the way nothing happened. He opened and shut the foul-mouthed fridge. He played the dead keys of Jobie's PC like he was Alfred Brendel. He inspected the handpump on the boiler, and admired the method of its manufacture, and the skill of the soldering. Soldering sounded like soldiering, now he thought about it. Those red nails. John Wayne. Steve McQueen. Mel Gibson. Take no shit from anyone. Soldering and soldiering. Bang bang. Boom boom. Those old, old films when there was no horror at all. Or any Do It Alls. Rows and rows of paints and fancy tools and bits of plumbing. It was just one of those things a man had to do, wasn't it? Spot of the old DIY. Bang, bang with a hammer every Sunday.

Soldier sat down. Soldier stood up again. Soldier looked outside through the window in the kitchen at his combat suit, which was still swinging there, decapitated. Soldier stumbled over his kitbag in the hall, and soldier thought for a moment or two about entering the code and removing it—but where? Upstairs, he leaned over the white bowl of the toilet, and retched dryly. In the bedroom, he counted his shirts, and sniffed those he didn't recognize before trying them on to check their size and cut. He rummaged through Ginny's underthings and held them up to the fine morning to see if there were any stains. But her stuff, of course, was new to him. Or much of it. And his memory was shaky. Pink rubbish from catalogues. And an empty laundry basket, everything clean as if she'd been expecting him. She was turning into cheap pink nylon catalogue Barbara Cartland, which he supposed he could forgive her, what with no Sainsbury's and her mumbling in her sleep about the fucking fucking shopping. She'd had it hard as well. Soldier knew that, touching her bras, loving the ghost body that they contained. Glimmers of a lust, which was really a sort of longing, the same kind you felt at the far end of a battlefield, not lust at all, but wishing for everything that was soft and womanly and had nothing to do with blood or nails or plumbing. *Why angry? Why now?* She'd said that in her sleep too. And *Jobie, Jobie, Jobie. Just keep your fucking hands.* And Curtin. Katin. Karten. She was almost getting it right now, was Ginny. While soldier lay awake, she was stealing his dreams.

Karten.

Lots of summonses and record-keeping. In and out of the rain. Name and rank and serial number, and a whole lot more too, seeing as these were soldier's own guys who were doing the debriefing in tents they'd put up themselves. Last order of battle. Skills lost and acquired. Who'd lost what limb. Who was dead, and who wasn't. Soldier, he ticked the relevant boxes. Of course, there were rumors. There were always rumors. But soldier was

comms, right? A few weeks and he'd be up in a Jupiter, then linking up hotel databases on civvie street. Who gave a flying shit about comms at the end of anything? Who even gave a shit about comms even at the beginning? Then it came. Just another summons on just another rainy foreign morning. Only this time the guys who collected him didn't say a word. This time they took him out through the gate of the holding camp, out beyond the wire.

It could have been a schoolhouse. It could have been a hotel or an office block almost anywhere in the world. It could have been a station for the secret police. It could have been anywhere and anything, and the corridors and the stacked plastic furniture and the signs pointing this and that away really didn't tell soldier anything as he was hauled in dripping from the rain. All that mattered was the one room that he was taken to.

There was a fine computer, humming. Precision joysticks. Gorgeous peripherals. Several expensive-looking screens. Jobie would have been jealous. Soldier, he was jealous himself. It was nothing like a torture chamber. No hooks, no wires unless you counted all the comms, no baseball bats. And Karten, he'd been waiting for him, toying with this and that, several windows on the go on several screens. *Downloading*. Whistling to himself and keeping the pot nicely boiling while he waited for soldier to arrive. An obvious comms guy, always keeping up with developments and busy. *Da da, diddy diddy dum dum*. Soldier didn't recognize the tune he was whistling until much later.

Soldier, clumsy in his wet combat suit, diving up from the mud and the shit, had rolled over a swivel chair and sat by Karten. They scarcely needed introducing. Men of the same mettle. The comms, the keys, the cursors, were universal. Soldier, he could already guess what Karten was about. Soldier had been telling himself these last weeks that nobody gave a shit about comms. But soldier, he knew instantly what Karten wanted. Karten wanted comms. Comms was suddenly life itself. Comms was everything.

Downloading. It was just a question of the details.

Karten, he wasn't an ugly guy. He wasn't Donald Pleasance. He was better-looking, in fact, than soldier was himself, and probably spoke better English. Karten, as he and soldier sat there on their swivel chairs and admired all this fancy machinery, explained how he'd had this vision, a way all the things they needed from their captives could be taken without the fuss or the mess or the screaming. Of course, his seniors had been doubtful—but at the end of the day, they were prepared to listen to youth, to take chances with innovations. Which was why soldier's side had lost, wasn't it? Those digital fireworks. The vials and the mad cows. It was what had happened to Nintendo. It was the flaming tourist planes. It was the stinking green reservoirs. It was that dog in Sainsbury's.

Downloading.

In his suit, still just Karten in the room, soldier was asked to stand up again. He toyed with resistance, with kicking things over, but he recognized Karten. Karten was like him. And soldier was fascinated. Karten was fishing out wires and cables. Tutting to himself when he couldn't find the things he wanted. Karten was whistling that tune. *Da da, diddy diddy dum dum*. . . . Humming and whistling between his teeth like a handyman as he busily sorted out the right sockets from all this fine kit of his. That tune.

Da da, diddy diddy dum dum. . . .

Karten studied the inputs on soldier's suit, which were bent and crusted.

He tutted over the fiberoptics jutting from the collar. Then he stood behind the soldier and lifted something over his head. It was just a VR helmet. Then someone else came in. Soldier felt a touch of air. Soldier heard the tinkle of glass. A medicinal waft. Something stung his arm. Test lines shot before his eyes. Numbers scrolled down. He seemed to be hovering. His hands jerked and twisted. *Downloading*. Soldier was never quite sure how much of this was actually his combat suit or the helmet and the other stuff Karten had added to it, and how much was drugs—although drugs, given the simple beauty of Karten's conception, seemed a bit of a cop-out. Less the pure idea. And soldier was interested, still remote from himself. The numbers tumbled on. *Downloading*. This was some size of program, given the standard of kit Karten was using. Plainly all-senses VR. *Downloading*. The numbers tumbling. Then they stopped. And soldier was falling.

Soldier was in hell.

Soldier was screaming.

Ginny and Jobie came home together. Soldier watched them rise up through the wavering glass of the front door, two swimmers, and wondered to himself if they hadn't agreed to meet up together before they got back here, so they didn't have to face him alone. They both said *Hi* and pushed past, eyes averted, and climbed over the big blockage of his kitbag as well. They headed up the stairs and into the kitchen and got on with their lives.

"You weren't out in the car, were you?" Soldier asked Ginny as dusk descended, just before the power came on.

"You mean Chitty Bang Bang?"

"Is there another one?"

"Don't be ridiculous, darling." Ginny lit a cigarette from the candle that was burning. "I was . . ." She blew out slowly. Grey waves wafted over soldier. He wondered if, starting smoking himself, he mightn't get closer to her. ". . . just talking."

"You talk in your sleep, Ginny. Did you know that?"

"At least I *sleep*. You've barely slept at all, have you? If you keep up like this, darling, something's going to snap."

"Stop calling me darling."

"You don't like it?"

Soldier shook his head. "I don't know what I like. I just wish I was back home."

"Darling, you *are* home."

Soldier looked at Ginny. Ginny looked at soldier. Red nails. Grey waves. DIY. The boiler with its neat new handpump behind her, icon of a new age. Dinner soon. Shit from a carton. Karten. Darling. Chitty. His gorge was already rising.

He was falling, screaming.

He remembered this: a huge grey plain, and running under a spotlight, and clawing at a wall until his nails were bloody. And getting through. And running again. The plain was endless. So were the walls. There was no sense of time. You could loop it round until it was bigger than any universe, and still not really trouble the memory of your average modern PC, let alone all this fancy kit. Soldier didn't need Karten to tell him that. Monsters lollopped across this plain. If soldier stopped, they crammed him into their mouths and ate him. Ripped off his head and sucked out his spine and

chewed his bones while he was still alive and walked around with him screaming for days in their acid bellies until they shat him out again. And *he* was shit then, was soldier. He was made of monster shit and he was running.

He was screaming.

The power came on. The lights billowed.

Soldier left Ginny standing in the kitchen. He ran upstairs toward the click of keys. Jobie would be on the PC. He knew that already. And Super Mario was there on the screen and on Jobie's T-shirt.

Downloading.

Jobie gave soldier a *what-do-you-want-this-time* look from the glow of his machine. Soldier stood there, breathless. He was wanting to say something. He was waiting for the exact words to come to him.

"How old are you, Jobie?"

"Don't you know, Daddy?"

"What can't you just tell me? What's the matter with the truth now, anyway?"

"The truth is . . ." Jobie said, pausing midway as he worked through the neat adult complexity of his statement. ". . . is that I'm busy with this."

Downloading. Mario was grabbing his crotch. Winking and gesturing. *Downloading.* Becks and Giggys were above him. Wrinkled posters from another, cleaner, age. They'd be fat and old now, long past their playing days. Forget Manchester United. This was the age of comms, and comms was everything. It was just a question of the details. Slowly, Jobie turned his head back toward the screen. He tapped the keys without quite depressing them. And he hummed to himself. *Da da, diddy diddy dum dum. . .* That tune. Soldier, he was tense and he was easy. Soldier, even here upstairs in this new SOC, was ready for battle. Because the SOC was everywhere when you came down to it. Weeks now, he'd been traveling, running. And he was still in the SOC.

Soldier, he was ready for anything.

The PC, when soldier hit it, broke easily. Cheap plastic, which had lasted far longer than concrete, but was as ready for this apocalyptic moment as anything could be. It caved in like white chocolate beneath soldier's fists, and sat there afterward gently fizzing and smoking as Jobie screamed and hollered and tried to scramble further and further into the corner by his bed. But Mario was gone. Super Mario was dead. Even Jobie's T-shirt as he hugged himself suddenly looked washed-out and aged. And his Nikes were suddenly filthy. Soldier was glad to see that. He reckoned he was starting to get the hang of things here at last.

"What the hell's happening up here? Where's Jobie. . . ?" Ginny was suddenly in the doorway, looking around for her son until she saw him quivering under his duvet, then she was scrambling down across the carpet on all fours as if she was under fire. But soldier, he could have mowed her down just as easily from there. "You *shit!* What the hell do you think you're doing? That computer's all that Jobie's got, for godsake. . ."

She was talking, swearing ten to the dozen, as she tried to bundle Jobie up in the duvet and lift him. But Jobie was surprisingly heavy. Her hands kept slipping. It was man's work, really, soldier's work, to lift up a son of this or whatever age. Anxious to help, anxious to make amends for the PC's smoking ruin, soldier stumbled toward them, arms outstretched. Weeks

now, he'd been running, traveling. The SOC, the holding camp, Karten, that ghastly plain. He'd been running for this moment, this contact. To be home with his wife and his son in his son's bedroom. To hug and hold them in a moment of unequivocal love.

But he knew he must look like some monster to them.

"Just keep back, you *bastard!*"

Ginny made a quick, sweeping movement with her hands. Her nails raked across his face. Soldier touched the wounds for a moment, missing his combat suit. And his hands were bleeding already from the sharp wreckage of that PC, and from clawing through the walls on that endless plain where the giants bellowed and hollered and ate him up and shat him out again. But wounds were nothing.

"Who the fuck do you think you are, anyway? You fucking, fucking *bastard.*"

Ginny was slipping from the bed, dragging herself, dragging Jobie, dragging at the duvet, as the distance of the carpet floor suddenly tunneled out, and soldier watched them scurry by in the wild darkness as the lights crunched out, knowing they were unarmed, knowing they were non-coms and not a danger to him. They fled down the stairs. Soldier could hear them down in the lounge, and in the kitchen. Moving things around. Sobbing. Talking.

Soldier sat down on Jobie's chair in front of the ruined computer, quite liking its dull electric smell, the ticking of the plastic, which reminded him of comms, and was essentially homely. He didn't feel sick any longer. Which had to be good. He didn't feel anything. That was what happened to you eventually. When you were scrambling through the endless walls and turned into endless loose piles of shit on that endless, endless searchlit plain. You stopped feeling things. Sometimes, you even stopped screaming.

Calm and easy and relaxed, his bloody hands moving by touch, by memory, soldier clicked the K key of the ruined keyboard. He clicked the A and the R. He spelled out Karten. Then he tried DIY, all in capitals, big letters for the big jobs. Then Chitty Bang Bang. Nothing happened. The PC was ruined, after all. Nothing on the screen. Nothing downloading. No numbers scrolling down. Dead Super Mario, who'd been a plumber of sorts, now soldier thought about it. So perhaps he was the source of Ginny's secret help?

Ginny and Jobie were still busy downstairs. Bang bang. Soldier hadn't the faintest idea was edifice of dreams and nightmares they could possibly be constructing. He heard Ginny say the word darling once, and his soldier's sense, the chill on the back of his neck, briefly touched him with ghost fingers. But it quickly faded. She was talking to Jobie. And soldier quite liked the sound of the word now, was the odd thing. Soldier quite liked it when his wife called him darling. Who wouldn't?

Soldier thought of the holding camp again, his mind slipping there easily. Him and Karten, they'd probably always been waiting to meet. Perhaps that was the problem, for soldier had been as puzzled as anyone why he didn't simply break and tell them what they wanted. Which was only details after all—comms and passwords, which were nothing now that they'd been defeated. He'd been curious at the start, and even when the curiosity wore off in the shit and the screaming, he'd still been keen to cooperate. After the end of each session in the gloves, the helmet, fizzing with drugs in his modified combat suit, he'd reported any glitches he'd come across: the hanging bits of emptiness; the laughably odd blockiness of one particular monster

that could have come from one of the earlier versions of Quake; the odd cracking surges in the sounds in his left ear. Of course, they added to his anguish when he was experiencing them, and soldier realized that they could well have been intended in the first place. And there were other things. Even weirder. Once, in a hut out on the plain, soldier had met the dictator, and they had sat there together, simulacrum to simulacrum as the monsters outside bellowed and raged. But soldier had had little enough to say to the man when it came down to it. After all, soldier had been eaten up too many times; he stank of shit, which was, even in these circumstances, somewhat embarrassing. And soldier sometimes came across little oases of normality where he was seemingly back in that computerized room, and dream-Karten would smile at soldier as he removed the VR helmet and tell him that that was all over. Yes, truly. The terms of the treaty involving New Sector B had been finally agreed and soldier's cold and muddy co-warriors were being herded across to the old military airport even as he spoke. Karten smiled. He wasn't joking. He gave a shrug that was almost civilian. Search me. Fuck you. What else was there to say? Soldier, he heard Karten humming as he dragged the terminals from his stinking combat suit and clumped out of the room for the last time. *Da da, diddy diddy dum dum. . . Da da, diddy diddy dum dum. . .* Then outside, all hell would be waiting. The monsters would grab him up and tussle over his entrails as they staggered across that searchlit plain with bits of him dangling from their mouths. It was hard to tell, sometimes, what was torture and what was fantasy and what was entertainment, let alone where reality might end or begin.

Soldier grinned to himself in the crunchout darkness of Jobie's room. At least he knew now what it was he'd been protecting by his dogged refusal to co-operate with Karten and give him the passwords and the keycodes. Which was Jobie. Jobie at this PC, which was now safe and forever broken. Even the dictator, after all, wasn't a wizard. He couldn't—*could* he?—reach out and recombine a smashed PC? There was no such thing as magic, any more than there was Sainsbury's, or McDonald's, or Ryan Giggs. All of that was gone—so many of the good things—but soldier, he still had a son, and a wife who now called him darling. Soldier, he was lucky.

Soldier glanced back into the room, and he saw a ghost-Karten turn to him from Jobie's swivel chair. Karten smiled at soldier and the smile was warm, encouraging. After all, he wasn't Donald Pleasance, any more than soldier was Mel Gibson. He was just a comms guy with a job to do. And Karten was still whistling that tune. Soldier joined in with it, too, in all its silly beauty, and he pulled back Jobie's curtains at the window as he did so, and he looked out at the suburban night. Weeks now, he'd been traveling, just to get to here. Thing was, he'd never really understood until now that Karten had always been beside him, urging him on, testing him. But comms itself no longer seemed the important link between them. They'd both soon be out of a job in any case; there weren't enough hotels to link up now on what remained of civvie street. Soldier stared out at the houses and bungalows in the darkness. Beyond that, shimmering at the edge of everything, he was sure he could now see a grey and endless plain.

Downstairs, there was one last dragging bang, then the anguished creak of the broken kitchen door swaying open. Soldier realized that Ginny and Jobie had probably been dragging bits of their possessions together, which was man's work really, soldier reflected; something he should have been do-

ing for them himself. They were fleeing the house, which stood to reason in these circumstances. They were refugees from the SOC, and from him and from Karten and that terrible plain. These days, soldier decided, we are all refugees. Soldier nodded to himself. DIY. Super Mario the plumber, and that neat job he'd done on the new handpump on the boiler and those other more secret acts that, as the new man about the house in soldier's absence, with a dressing gown hanging on the back of the bathroom door, he'd probably also been performing. Ginny's red nails. *Downloading*. His flaccid prick in her mouth like some war victim. And calling him darling. And Jobie, almost the same, coming in dry out of the rain. The dreadful McDonald's. And that song, which both Jobie and Karten had been humming, singing. To soldier, it all made a kind of sense.

Soldier heard the unmistakable boom of the garage door. Then the sound of the Chitty Bang Bang's engine starting up; a ragged cough of chickenshit and feathers. He pursed his lips and gave another whistle. *Da da. . .* And there Chitty was, cruising out along the drive's wrecked tarmac. The long, gleaming bonnet of that fantasmagorical machine. And as soldier watched, it seemed to him that Chitty spread her wings, and started to rise as she turned out along the road, just missing the unlit lampposts, shaving the rooftops, heading up for the skies. Chitty was flying, and Jobie was laughing, whooping. And as Ginny turned the wheel, she gave soldier an easy smile, a vanishing wave.

Soldier watched until they had disappeared entirely beyond the bungalows. He couldn't remember quite enough of the story to be sure where Chitty Bang Bang was heading, other than that there was a sort of battle in a distant and magical kingdom, and that everyone was safer and happier by the end of it than they had been at the beginning. Soldier turned to look for Karten, wondering if he might know what happened, but Karten was nowhere, dream or otherwise. Soldier was on his own. He went to the door of Jobie's room, and headed down the stairs, and into the hall. The crunchout, not-Sainsbury's, downloading, minx, CJ3, darling—by now he was even getting used to the terminology of this particular portion of the SOC. But heading through the kitchen, then out into the wild back garden, where the roses badly needed pruning, was a tricky maneuver even in this darkness. Time for a grenade to sterilize the forward ground, if he'd had one on him. And his combat suit, swinging decapitated under the stars as the monsters sniffed for him behind the trellis, could have been booby-trapped. It could have been anything. But soldier hauled it off the pegs on the line anyway, and darted back into the kitchen before he could be target-acquired, and dragged it on. The suit felt fresher, now that Ginny had washed it. It even gave a little beep when soldier touched the pad on his chest. He gave a little shudder.

Soldier's kitbag still lay in the hall where he'd left it. He keyed in the special code that released the molecules that had held the top zip in place, and that bonded its base to the carpet where it had been resting. The bag loosened and fell open, and soldier blinked and retched at the foul gas that escaped. But it came from nothing but foreign mud and foreign rain and things unwashed—the stink of the holding camp, which was simply the stink of all the locker rooms in hell, and nothing to be afraid of. Soldier burrowed though his decaying clothing until his fingers touched oiled metal. It barely needed him to activate it, did this gun he'd brought back with him. Already it was warm and thrumming. His own fantasmagorical machine.

Fire and forget. Soldier gave the keypad the extra string of code that was needed to activate the tripod, and it clattered and sighed; grey gunmetal crab rising up from the kitbag's foul grey waves. Comms, after all, was nothing. *This is this*, as someone had once said in a movie. The kitbag, which soldier had missed in the holding camp almost as much as he'd missed cleanliness and the absence of rain, had been a final parting gift from Karten. It and its contents had been something for him to bear with him to the end of the strange road on which he'd be long traveling, because a kitbag was always a soldier's basic responsibility, and a source of his security and self-respect.

Whistling to himself, relaxed and at ease, soldier glanced back at the kitchen, and up the empty stairway, and into the half-open door that led into the lounge. But the hallway, through which any assailant would have to pass to get to any other part of the house, seemed like the best and obvious place in which to make his stand. He touched the gun's smooth barrel. He admired its hidden lights, which flared as bright pinpricks in his mind as it and his suit made contact, comms to comms, machine to machine. He worked the silent breech, and considered angles of attack, and fields of fire, and possible lines of retreat. The swarming glass in the front door was an obvious nuisance, a gap between supposition and reality, a distortion of the available information. Soldier considered shooting it out, but decided against doing so. It would, after all, be an even greater nuisance to the enemy.

Da da,

Diddy diddy dum dum, diddy diddy dum dum. . .

Dee dum dum. . .

Soldier smiled and hummed and whistled. The giants, the monsters, were closing in. Already, he could hear them howling, whooping; their high-pitched screams. But soldier was relaxed about that. Soldier was easy.

Soldier smiled to himself.

Soldier whistled.

Weeks now, he'd been traveling.

At long last, soldier was home. ○

—For Chris Brown

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PET FOSSIL

Curled in the stone egg
The embryonic dinosaur—
Stone knees folded
Against stone claws,
Head bent to knees,
Tiny forearms
Tucked beneath its beak—
Is pet-cute.

You want to go to your mama
And cry, "Oh Mama I want one.
I will take care of it."
And she, alive again, will say,
"I know they're cute,
But you can't keep them.
They grow to be
Six feet tall.
They bite.
We can't afford
The dino-feed."

**You offer to do chores,
And she warns you that you can't
Just flush it down the toilet
When you're tired of it.
It is a responsibility,
So you couldn't go trying
To clear your conscience
(And frighten your friends)
With telling how
They grow up in the sewers,
Oviraptors chasing rats for food,
Honking
Like ghosts of geese
In the pipes
When dead leaves
Rattle in the gutters.
Our winters are too cold.**



**She knows it will be her dino.
She'll wind up doing
Most of the work.
You'll feed it, maybe,
But she'll do most of the cleaning out,
And visits to the vet,
If she could come alive again
And ask at the pet-store
For a dinosaur
About to hatch
To give you.**

**Anthropocentric, we learn with surprise
Dinosaurs were attentive parents,
Guarding the nest,
Feeding the hatchlings,
Impelled, presumably, by love.**

—Ruth Berman



THE ART OF FUGUE

Charles Sheffield

Charles Sheffield's newest book, *Spheres of Heaven*, will be out later this year from Baen. Mr. Sheffield is currently working on a revision and update of his very early novel, *Web Between the Worlds*. The update is necessary because it's about space elevators, and the proposed technology has changed a lot since the 1970s—even though the elevators themselves still don't exist.

fugue: in music, a form of contrapuntal composition in which a theme is taken up by several voices successively;

in psychology, a type of temporary amnesia that is a flight from reality.

You might say it came at the worst possible moment. Maisie, with no ear for music, had left the bedside player on. Normally that would make no difference, but this time it did. I felt my nape hair bristle. A stab of pain flashed through my head, and in place of Maisie's flushed face I caught a glimpse of another's intense gray eyes watching me.

Luckily, I can multi-task like a son-of-a-bitch. I doubt that Maisie noticed any break in the rhythm of our lovemaking. When the rush of blood is over she says to me, oh, Ches-baby, that was wonderful, wonderful. I make similar noises. But most of me is somewhere else.

We lay and maybe lie through a few minutes of required billing and cooing, then I say, "Maize, where did that music come from?"

"What music?"

I explain, and I ask, "Was it being recorded?"

She glanced at the wall. "No, not recorded. It's netted in."

"Damn."

"Why do you care? You don't do music, you do books." But she added, "You know, my system stores the previous piece in case I want to hear it again. Listen, Ches."

Blond and vast and juicy, she rolls over on the bed. Ahab, eat your heart out. Then the music begins.

I listen hard. It's crap. If it were all like that, Maisie would have enjoyed my hundred percent attention. But I know what's coming, and I wait.

And here it is, a delicate and delicious sixteen bars of polyphony, as out of place as a Bix phrase in the middle of a Paul Whiteman number, or Shakespeare sticking his bald head up out of the mud in Act Three of *Pericles*: "Thou god of this great vast, rebuke these surges." A nightingale sings in the depths of a swamp. Out of place, out of time. Superior. But again I feel an emotion so strong that it becomes pain, and again for an instant I see the face of a dark-haired young woman who looks nothing like Maize.

I have the music in my head, now and forever. But finding its source and composer is another matter.

I waited ten more minutes before I groped around looking for my clothes.

Maisie puts a hand on my bony rib cage. "Do you have to?"

"I do. My bountiful beloved, duty calls. I have to go work."

"You really heard something, didn't you?" She's sitting up straight. "Something in that music really got to you."

"How'd you know?" I'm sitting up straighter.

"You got more excited. Harder, more urgent."

So much for Ches Tauper's famous multi-tasking powers. Maize is smart as well as gorgeous, too smart for comfort. She knows I'm in the book business, and I wouldn't be surprised if she's on to the fact that my game is the theft of old first editions. She knows I like chocolate, but not chocolate cake. When I visit, she has mints and aniseed candy waiting. She knows I can sleep only in total darkness. I have my fingerprints on her outside and my DNA on her inside. She has too much of me.

Too much for what?

I'm not sure.

"Ches, couldn't I help you?" she asks.

"Help me what?"

"Find that music that excited you so much."

"Not unless you can change to a Maisie who doesn't turn heads everywhere she goes. For my work you need to look like a rat. Like me."

Nice try, but I'm not sure it works. She frowns and says, "Be careful, runt. Watch out for that skinny butt. I'd hate to have to cross you off my list."

"Me, too." I kiss her. When I leave to find the chute leading to the Pandora outer shells, I'm frowning, too. I wasn't kidding when I told Maize that I had a job to do, and a tough one. I have to track down that fleeting touch of musical genius, find out who wrote it, and tie up whatever rights are available. And music isn't my strongest suit. For years, I've worked stolen first editions, that's where my best business contacts lie. But for the past few months, for no reason I can explain, I've been doing more and more pirated music deals.

Why bother with this new one? Why not stick to what I know, and the hell with what I just heard?

That's a good question, and another one I can't answer. I see once more a

perplexing glimpse—memory?—of that female face. Is the music hers? Have I, somehow and somewhere, run into her or heard it before?

A hundred years ago, it would have been easier to answer my own questions. Then the data bases were general, common to every one of the Hundred Moons. Not any more. Economic independence sounds like a good thing, but it tows isolationism along behind it. I'd need permits to get onto the big moons; I'd even need a permit to leave a tiny nonentity world like Pandora, which compared to the elephantine moons of Jupiter is like a tit on a weasel.

First, though, is my journey necessary? There's a chance, a minute one, that my quest will end where it began, here on Pandora.

I came to Shell Three, dropped into my minimal height-length-width cubicle, and plugged in. I I/V'd a complete nutrition program, because I had no idea how long my search might take. A normal search is a twenty-second exercise: plug in, define search parameters, and pull out. A second or a minute or a day later, however long it takes, the Navigator comes back with what it finds.

The assumption, of course, is that you can parametrize the search. I couldn't. I know how to parametrize books, it's my business, but music is another matter. I knew what I had heard, and I would know if I heard something else by the same composer, but I have no formal training in music. I couldn't *describe* what I heard in a way that the Navigator would understand. Think of the person you love most in the universe. Now describe that person—not the appearance, that's easy; describe what it is that makes *this* the best-loved person. If you say legs, cock, tits, or ass, you're a witless loon and you'll never understand my problem. Or maybe you understand as much about it as I do. I couldn't define the undefinable. I could only sit and wait, and, if I heard it or something close enough, shout, "There! That's the one!"

The shout never came. When I dumped out after seven futile hours, I was certain only that my source was nowhere on Pandora. The music I'd heard while surfing Maisie had been pirated in from outside and netted. No one, naturally, would admit to the theft.

So. I had to travel, and I might as well do it at once.

Why me? Or, to put it another way, if I recognized certain music as being of great potential value and I was not a musician, why didn't other more qualified people do the same and grab licensing rights before I could move a meter?

The arrogant side of me says that though I never trained for either one, I have uncanny judgment and discernment when it comes to words or music. My other side, less bullshit, says that I'm the Autolycus of the Hundred Moons, a snapper-up of unconsidered trifles that no one in his right mind would want. I'm not particular. I do books best, but if it's a video and I can pirate it, great. If it happens to be music, I'll take that, too.

But the fact that it *was* music made my task harder. I knew I would have to travel, but to where? My contacts with the seamy side were all in books, they wouldn't get me far with music. And although the Hundred Moons is an exaggeration, with the inhabited satellites of Jupiter, Saturn, Uranus, and Neptune numbering only fifty-five, that's still fifty-five interplanetary jumps, fifty-five entry permits, and fifty-five unpleasant re-pressurizations, because every moon's inhabitants have their own idea of the right pressure and oxygen content. More than fifty-five, if the search happened

to take me to the Inner Worlds. Also, there were no guarantees at the end. It was enough to make a man give up and fly back to Maisie's unfaithful arms.

Instead of sitting and feeling sorry for myself, I plugged in again and started on the next task. This one wasn't music, not even musical crap; it was the tedious, uninspired job that I'd done a hundred times before: tracking electronic shipments. There are thousands of data bursts every day traveling all over the Hundred Moons, descriptions of commercial transactions from everywhere in the system. Description of legitimate business, most of it, but you could bet that some of them contained pirate data, occult files tucked away in the middle of all those official records.

Electronic data makes music of its own, digital *leitmotifs* too rapid for human solo interpretation. This time I had no choice but to seek help from the Navigator. I set up the interface and waited through the unpleasant first seconds when something inorganic takes charge of your brain. Then we were off and scanning, thousands of data squirts a second. I don't know if I'm in charge, or if the Navigator is using the gigantic capacity for parallel processing possessed by every human. In either case, half an hour later, we were done, and eight data files had been tagged and downloaded. I was utterly exhausted.

It was four more hours before I had the strength to find out what we'd netted. Two were accidents, repeat strands of interlocking data that mimic musical structure enough to fool me on the fly. The other six were all genuine and matched my mental template of the unknown composer. In each case, the gem was concealed in a mass of dross, but a few bars were sufficient for me to feel the bright spear shining through and stabbing me to the heart.

Now I had that, I had to back-track, following the signals to their origins. Another five hours work, and I didn't like the answer when I had it. All six data bundles started on Earth, the place above all others in the system where I prefer not to go. It's not just the high-gee environment, I can stand that. Hell, I was Earth-born and I still count my age, twenty-four, in Earth-years. It's not the skimpy underground network there, either, the absence of the contacts I've built up over the years in the book world. What, then? I hate to use the word, but I guess it's something psychological. Somehow I feel afraid of Earth, and I'm reluctant to go there.

So now it was time to say, all right, you took this one as far as was reasonable. Let it go, forget it, and another deal will drop into view in a few days or weeks. But while I was thinking, relax, find something else, a pulse was throbbing in my head and my fingers were checking transit times to Earth. I couldn't hop direct, there's no Pandora-Earth link. However, there's a Pandora-Dione-Ganymede-Earth series, with minimal connect waits at each stage.

When the Pandora link transfer took place, I was in the booth. Wherever that music came from, I knew where it went. Deep into my bones.

Two days later, I was sitting in the Grand Hall of the Kourou Complex, wondering what I was doing to myself. Kourou Complex isn't *on* Earth, as it turns out, it's *around* Earth. The trail led down to the surface, then bounced me right back up for a new contact in geostationary orbit. That made four links in thirty-eight hours, and I was learning it wasn't lack of sleep or pressure changes or gravity shifts that gets you. It's the mandatory bio-spray, different on each transfer, that sluices your body clear of pathogens and

parasites that are on the index for each of the Hundred Moons. My eyelash mites were history. My gut was as bare of intestinal flora as the surface of Charon. On the other hand, I didn't feel much like eating.

My contact was a thousand-pound cat-furred bruiser who wouldn't survive an hour in Earth gravity. She—when in doubt, assume the feminine gender—didn't glance at my I/D; instead her pocket familiar scanned my credit rating, while her vertical-slit eyes scanned me. She rumbled something from deep within her meter-thick chest.

"Say what?" I had the shakes, and my ears were still adjusting to eight psi pressure.

The rumble rose an octave. "I said, Ches Tauper, that your contact told me I can do business with you. But he says you're books, not music. And he didn't tell me what you're *really* after."

"I told you. I want to find who wrote that music."

"Why? What you want with him?"

"I want—" I paused. What did I want? I've discovered and milked a few music talents, but they were all Saturn system locals. I had never come this far, never suffered this much discomfort, for a hidden nightingale. "Why you ask? Why you care?"

A huge shrug, fat and fur rippling. "Makes us wonder when somebody changes their line of business. Makes us wonder why you doing it. What you want with him, that your business. But cause trouble for us because you're hot and on the run, we come after you and kill you."

Fat Cat wouldn't last ten seconds in my home territory of the Pandora Deep, but I saw no point competing testosterone.

"Understood," I said. "Can we trade now?" Her familiar rattled black tail scales and hissed its disapproval as our hands touched. Ten seconds later, the Grand Hall spun about me as the information packet crossed my blood-brain barrier and diffused home.

When I could see again, Fat Cat was gone. Thirty seconds later, I was on my way.

Earth had been a red herring, a way station, a deliberate plant. I jumped gladly to Miranda, through what should be my final transition to the middle deep, forty kilometers down in Gulliver's Cave, where the Lonely People clustered in their millions. Where the composer I sought, according to Fat Cat, was plugged into the Miranda Assembly and could never leave. There was a suggestion that I would find myself in the end dealing with a computer, but I didn't believe it. I know computer music, and I like the best of it, but what I was chasing had a human feel.

The delivery chute spat me out at my destination. I landed, smelled ozone, and glanced around. I swore. This wasn't a computer link. It wasn't even the minimal cubicle of a hard-wire. This was tall and wide, and furnished in a way that proclaimed wealth anywhere on the Hundred Moons.

But maybe it was the right place anyway. I saw an antique forte-piano against one wall, a Glassman synthesizer built into another. The room was packed with the living elements of music, instruments and stands and shelf after shelf of sheet music and recordings.

Two people sat in the middle of the room on upright chairs. They were upright, too, taut with tension, a human man and woman showing no sign of any Hundred Moon modification. If I had to guess, I'd say they were Earth natives—the place I'd just come from.

After a moment of nothing, the man said, like an incantation, "Ches Tauper. Ches Tauper."

There was a pause, while they stared at me as though expecting me to burst into flames.

"I'm Ches Tauper," I said, more calmly than I felt. "I'm what I'm supposed to be. I'm not sure you are. I came to do business. Let's have your explanation for who you are and why you're here."

The woman, fine-boned, white-haired, nodded. "Of course. Sit down."

I did, in the chair she pointed to.

"And listen," she says.

But she doesn't speak. Instead, music bursts out all around. This time it isn't just for a few bars or a few seconds. It rolls on, minute after glorious minute. The counterpoint is astonishing, but counterpoint is a learned skill. You can take lessons in counterpoint. What can't be taught is the gift of melody, and the melodies I'm hearing are like streams of liquid gold. I'm more than listening, I'm close to crying. Suddenly, my brain feels like it's ready to burst.

Finally it ends. The man is big, a head taller than me, and with huge hands. He says expectantly, "Well?"

"It's wonderful," I say. "I never heard anything like it in my whole life. Who wrote it?"

That brings the oddest response yet. The woman's face crumbles, and the man begins to cry.

"You don't recognize it," he says. "And you don't recognize us. Oh, Franz, Franz. We hate to have to do this."

I start to stand up, but I'm way too slow. The chair reaches out around me, grabs, holds me with slender wire bonds. I fight, but it's no use.

"You're Franz Buhler," the woman says. "Franz, don't you remember? You're *Franz Buhler*."

I'm starting to deny it, but I can't. The name, Franz Buhler, starts my head spinning, sends me rolling back through time. I'm standing in a place filled with birdsong. An aviary. I hear the nightingales singing, but somehow they are both inside and outside my head. Two people are in front of me—these two people. They are saying, "Franz, you need help." *You need help. You need help.* The song of the nightingales. Their music is flowing. It's all around me, it's inside me, and suddenly it's flowing out of me. I am weeping, too.

I try to back away, but now I'm in the chair again, uselessly struggling against the sharp wire. The man says, "Franz, you *must* know us. We've hunted you for so long! Over and over, month after useless month!"

"Until we learned how well you had hidden yourself," the woman went on. "We realized we'd never find you this time, unless you came to us. We planted musical fragments all over the Hundred Moons, with trails leading here. We've waited more than a year."

"It's *my* music." My mind staggered before the rush of understanding. "It's *all* my music! I wrote it—we played it together, Hester and I." I remembered joyful sessions, miraculous musical meetings of minds, the first recordings. The face of the dark-haired woman appeared again, and this time I could see her completely. "What happened to Hester? Is she here with you?"

"Don't ask!" The woman's voice cracked. "Morey, don't tell him!"

It was too late. Memory grabbed me and held me tight.

Hester is waiting for me in my room, where I have asked her not to go. She is sitting over by the synthesizer studying a score, and as I enter she looks up at me. Her face is puzzled. "Franz, why didn't you ever show this piece to me before? It's absolutely beautiful."

"I just finished it." A lie.

She laughs. "Good. Then I'll be giving it its first performance."

"Hester, don't."

"Franz, stop being modest." She turns and sets the music on the synthesizer stand. "I haven't played it yet, but already I can tell it's better than anything you've done before."

I'm ready to ask her again not to play, but I'm too late. The first chord sequence grabs hold of me, and after that I can't move. I listen, and I begin to weep. She is right, it is absolutely beautiful—better than anything that I have ever allowed her to see and play. How can I, or anyone, live with such beauty? As the music builds and builds, I am at last able to move again. I step forward, shivering, approaching Hester from behind. I spread my hands wide, and lift them toward her slim white neck. She plays on, unaware.

"I killed her, didn't I?" I said in amazement. "My God. I killed my own sister. I went crazy and killed her!"

"Don't think that way, Franz. You need help."

But now more images were flooding in. "And you two. I know you! You're my mother and father!"

The woman reached out a hand that stopped well short of touching me. "Franz, don't struggle like that. We had to do it this way. The other times you broke free and ran. You can't get free now, you'll only hurt yourself." Until she spoke I hadn't noticed the blood streaming down my forearms. She went on, "Relax, don't fight. Help is on the way."

"You bastards. No matter what I do, I'll never hurt myself as much as you two hurt me. You made me."

"No!" That was the man and the woman, shouting in unison.

"You did. You selfish, obsessive fuckers! Morey Buhler, world-famous composer, Lillian Gehrig, world-famous performer. The odds weren't good enough that two master musicians would have talented children, were they? And anyway, for you, talent wasn't enough. You wanted Mozart and Bach rolled into one. You had to have genius. You had to go beyond nature and diddle the genes."

"Franz, only the finest genetic specialists—"

"Small, harmless changes—"

"You decided to genemod us. But what you wanted isn't easy. Hester was your trial run. She was extraordinary, but not quite good enough. With me, you decided to pull out all the stops. Go all the way."

"Franz, it worked! You know it did! You have genius, great genius." My father has dropped to his knees with his hands clasped beseechingly in front of him. He looks like a bad actor playing Shylock. "Listen to the music. Your music. There's nothing like it anywhere in the whole Hundred Moons!"

I shout at him, as his finger reaches out to the controls. "You were warned, weren't you? The correlation of that gene mix with insanity—murderous insanity—was better than 90 percent. But you decided to take the risk."

My hands are around Hester's neck, squeezing as tight as I can. Her

hands have left the keyboard and are clawing helplessly at mine. It will not help her. I am far stronger. But stopping her breathing is not enough, because it doesn't manage to stop the music. That goes on, merciless, inside my head.

Still are thy pleasant voices, thy nightingales awake. The other music starts again, from outlets all around the room. But I don't need it, because Ches Tauper is dead. Franz Buhler is alive, and new music is rising like a storm within him, towering polyphonic thunderheads that overshadow everything. I can't stand it now, any more than I could stand it then.

"Three times," mother is saying. She is on her knees, too. "Three times we found you, and three times you found a way to escape. Can't you see we had to do it like this? We didn't want to, didn't want to trick you and bind you. But you gave us no choice!"

I scream, trying to drown the torrent of melody that is cascading into my mind. Then I turn my wrists outward, tighten my fists, and release the neural trigger.

I scream again, but this time it's pure animal pain as lines of flame run along my forearms. The buried lasers fire, my flesh at the exit points chars, and bolts of light fly across the room. They hit and pass uselessly through the kneeling figures. Behind them, shelves of music spark and flame.

Holograms. Of course, my parents wouldn't risk a physical presence. I killed Hester, and they know that to make the music stop, I'll kill them if I can. They want to noose me from a distance, lock me up, sedate me just a little—so that I can produce more music and still be their son, the world-famous composer.

I flex my right arm, turning it inward as far as it will go. It is enough to bring the beam of the laser onto the arm of the chair that holds me. Sparks fly, my nostrils fill with poisonous smoke, and the chair shudders. The bonds encircling my arms and legs release as the chair's circuits for self-preservation and repair snap into action. I jerk to my feet and away from the chair in one movement.

I am free—physically. But the music inside my head goes on, and it is telling me to find something to kill. I turn a full circle, lasers lashing at furniture and musical instruments and walls, while the flesh of my forearms sizzles and cooks. Only when the room is a smoking inferno and I can scarcely breathe do I run for the door.

They are sure to have blocked every escape route. But will they expect me to commit suicide? I run along the corridor, find a garbage drop chute, and dive in. It's a long free-fall to the central collection unit. If I hit a bifurcation point, the impact will kill me. If the disperser is active when I arrive at the bottom, I will be dissociated to my component atoms. That will be a relief. The music is coiling around my head like a great snake, ever growing in complexity. I realize that it is a twelve-part embellishment and deepening of the *ricercar* from Sebastian Bach's "Musical Offering." No human can achieve that level of profundity and beauty, and remain sane.

Still in freefall, I reach into my pocket, pull out the anesthetic spray and tranquilizer, and shoot it into my open mouth. I'm not seeking relief from the agony in my seared arms, nor from possible immolation in the disperser. I just want the music to stop. It is my soul and my passion and my reason for living, and it is too glorious to bear.

By the time I hit bottom, the sounds in my head are fading. As the nightingales fall mute, I can think again. Unfortunately, the power of the

smart anesthetic is decided by the extent of my wounds, and I suspect that I have only minutes of consciousness left. I have landed in piles of soft garbage. I know that I must get outside the dispenser, or when it becomes active I will die at once.

In blessed quiet and utter darkness, I drag myself forward, on through heaps of old food, throwaway clothing, cold shit, broken furniture. It is the stinking detritus of a million Miranda dwelling units. I belong here. I too am detritus, the tattered and worthless remnant of failed experiments. *My heart aches, and a drowsy numbness pains my sense*; yes, but here at least no nightingales torment me with their song.

I crawl on, through a huge and birdless silence, seeking an exit point. At last I find one and stagger through it. One minute later, the door clangs shut. Behind me, the inside of the dispenser mimics a stellar interior.

Coda: They may think me dead, but that will not be enough. If I credit Morey Buhler and Lillian Gehrig with anything, it is inhuman persistence. Every way of leaving Miranda will be watched.

Unable for months or years to escape to any other of the Hundred Moons, I head for the center of the world. There, down among the Dead Men, I must recover and implement my plans.

My new identity was defined long before I became Ches Tauper. I will be Patrick Witty, the fifth of nine personas that I built and placed within me ready and waiting. Patrick is a large, fleshy man who trolls the Nether Regions of the system to find and peddle illegal species. I cannot wait to settle into his cold, immoral world, because even with powerful drugs to dull me dangerously close to inaction, the nightingales are still awake. The surge and swell of their song laps against the shores and naked shingles of my mind. They are trying to offer new music, complex music, music so beautiful that even my diminished self can barely stand it. I couldn't stand it before, when Hester was there to amplify the glory, and now I can't stand it alone.

I long to dive into the cool, placid depths of Patrick Witty, a tone-deaf man to whom all music is meaningless cacophony. Then I will be safe; safe from the nightingales, safe from myself, safe from my mother and father.


As the moment for the disappearance of Franz Buhler grows close, one fear lives on: Four times I fled, four times I became another. Or almost another. Always, some tendril linking me to my old self grew until it drew me back to my waiting mother and father. I become more adept at vanishing with each disappearance, but at the same time *they* discover more subtle methods of finding me.

As I dissolve to become Patrick Witty, I wonder. Will this be the last of my lives? This time will Franz Buhler, finally, be allowed to die?

*"They fuck you up, your mum and dad,
They may not mean to, but they do."*

In memoriam, Philip Larkin. I grew up in Hull, England. I often visited the University where he was the librarian, and I presume that I must have seen the great man, standing on the library steps and glaring at the students with that leer of the unfulfilled rapist you see in his photos; but I never knew him. I wish I had. ○

I MUST ADMIT



**I must admit
with some dismay
We touched the Moon
but didn't stay.**

**We looked at Mars,
we looked at Venus,
But somehow let
them both defeat us.**

**Star Wars®, Star Trek®
they were neater:
Speeches sharper
actions fleeter.**

**We wanted stars
not nearby objects;
Wanted bad guys
not long, hard projects;**

**Wanted war, not
peace and progress;
Bam!, Zap!!, Pow!!!, not
facts and process.**

**The course we chose
was trite and tragic:
We gave the funds
to Light & Magic®.**

—Timons Esaias



The author's latest book, *Probability Moon*, is just out from Tor. It's set on the same world as her Nebula award winning novelette, "The Flowers of Aulit Prison" (Asimov's, October 1996), and is her first off-world novel since 1985. Her latest tale for us ponders whether a bit of off-worldliness that has clummed to Earth could really be the



SAVIOR

Nancy Kress

Illustration by George Krauter

The object's arrival was no surprise; it came down preceded, accompanied, and followed by all the attention in the world.

The craft—if it was a craft—had been picked up on an October Saturday morning by the Hubble, while it was still beyond the orbit of Mars. A few hours later Houston, Langley, and Arecibo knew its trajectory, and a few hours after that so did every major observatory in the world. The press got the story in time for the Sunday papers. The United States Army evacuated and surrounded twenty square miles around the projected Minnesota landing site, some of which lay over the Canadian border in Ontario.

"It's still a shock," Dr. Ann Pettie said to her colleague Jim Cowell. "I mean, you look and listen for decades, you scan the skies, you read all the arguments for and against other intelligent life out there, you despair over Fermi's paradox—"

"I never despaired over Fermi's paradox," Cowell answered, pulling his coat closer around his skinny body. It was cold at 3:00 A.M. in a northern Minnesota cornfield, and he hadn't slept in twenty-four hours. Maybe longer. The cornfield was as close as he and Ann had been allowed to get. It wasn't very close, despite a day on the phone pulling every string he could to get on the official Going-In Committee. That's what they were calling it: "the Going-In Committee." Not welcoming, not belligerent, not too alarmed. Not too anything, "until we know what we have here." The words were the president's, who was also not on the Going-In Committee, although in his case presumably by choice.

Ann said, "You *never* despaired over Fermi's Paradox? You thought all along that aliens would show up eventually, they just hadn't gotten around to it yet?"

"Yes," Cowell said, and didn't look at her directly. How to explain? It wasn't belief so much as desire, nor desire so much as life-long need. Very adolescent, and he wouldn't have admitted it except he was cold and exhausted and exhilarated and scared, and the best he could hope for, jammed in with other "visiting scientists" two miles away from the landing site, was a possible glimpse of the object as it streaked down over the treeline.

"Jim, that sounds so . . . so . . ."

"A man has to believe in something," he said in a gruff voice, quoting a recent bad movie, swaggering a little to point up the joke. It fell flat. Ann went on staring at him in the harsh glare of the floodlights until someone said, "Bitte? Ein Kaffee, Ann?"

"Hans!" Ann said, and she and Dr. Hans Kleinschmidt rattled merrily away in German. Cowell knew no German. He knew Kleinschmidt only slightly, from those inevitable scientific conferences featuring one important paper, ten badly attended minor ones, and three nights of drinking to bridge over the language difficulties.

What language would the aliens speak? Would they have learned English from our second-hand radio and TV broadcasts, as pundits had been predicting for the last thirty-six hours and writers for the last seventy years? Well, it *was* true they had chosen to land on the American-Canadian border, so maybe they would.

So far, of course, they hadn't said anything at all. No signal had come from the oval-shaped object hurtling toward Earth.

"Coffee," Ann said, thrusting it at Cowell. Kleinschmidt had apparently

brought a tray of Styrofoam cups from the emergency station at the edge of the field. Cowell uncapped his and drank it gratefully, not caring that it was lukewarm or that he didn't take sugar. It was caffeine.

"Twenty minutes more," someone said behind him.

It was a well-behaved crowd, mostly scientists and second-tier politicians. Nobody tried to cross the rope that soldiers had strung between hastily driven stakes a few hours earlier. Cowell guessed that the unruly types, the press and first-rank space fans and maverick businessmen with large campaign contributions, had all been herded together elsewhere, under the watchful eyes of many more soldiers than were assigned to this cornfield. Still more were probably assigned unobtrusively—Cowell hoped it was unobtrusively—to the Going-In Committee, waiting somewhere in a sheltered bunker to greet the aliens. Very sheltered. Nobody knew what kind of drive the craft might have, or not have. For all they knew, it was set to take out both Minnesota and Ontario.

Cowell didn't think so.

Hans Kleinschmidt had moved away. Abruptly Cowell said to Ann, "Didn't you ever stare at the night sky and just *will* them to be there? When you were a kid, or even a grad student in astronomy?"

She shifted uncomfortably from one foot to the other. "Well, sure. Then. But I never thought . . . I just never thought. Since." She shrugged, but something in her tone made Cowell turn full face and peer into her eyes.

"Yes, you did."

She answered him only indirectly. "Jim . . . there could be nobody aboard."

"Probably there isn't," he said, and knew that his voice betrayed him. Not belief so much as desire, not desire so much as need. And he was thirty-four goddamn years old, goddamn it!

"Look!" someone yelled, and every head swiveled up, desperately searching a clear, star-jeweled sky.

Cowell couldn't see anything. Then he could: a faint pinprick of light, marginally moving. As he watched, it moved faster and then it flared, entering the atmosphere. He caught his breath.

"Oh my God, it's swerving off course!" somebody shouted from his left, where unofficial jerry-rigged tracking equipment had been assembled in a ramshackle group effort. "Impossible!" someone else shouted, although the only reason for this was that the object hadn't swerved off a steady course before now. So what? Cowell felt a strange mood grip him, and stranger words flowed through his mind: *Of course. They wouldn't let me miss this.*

"A tenth of a degree northwest . . . no, wait. . . ."

Cowell's mood intensified. With one part of his mind, he recognized that the mood was born of fatigue and strain, but it didn't seem to matter. The sense of inevitability grew on him, and he wasn't surprised when Ann cried, "It's landing *here!* Run!" Cowell didn't move as the others scattered. He watched calmly, holding his half-filled Styrofoam cup of too-sweet coffee, face tilted to the sky.

The object slowed, silvery in the starlight. It continued to slow until it was moving at perhaps three miles per hour, no more, at a roughly forty-five degree angle. The landing was smooth and even. There was no hovering, no jet blasts, no scorched ground. Only a faint *whump* as the object touched the earth, and a rustle of corn husks in the unseen wind.

It seemed completely natural to walk over to the spacecraft. Cowell was the first one to reach it.

Made of some smooth, dull-silver metal, he noted calmly, and unblackened by re-entry. An irregular oval, although his mind couldn't pin down in precisely what the irregularity lay. Not humming or moving, or, in fact, doing anything at all.

He put out his hand to touch it, and the hand stopped nearly a foot away. "Jim!" Ann called, and somebody else—must be Kleinschmidt—said, "Herr Dr. Cowell!" Cowell moved his hand along whatever he *was* touching. An invisible wall, or maybe some sort of hard field, encased the craft.

"Hello, ship," he said softly, and afterward wasn't ever sure if he'd said it aloud.

"Don't touch it! Wait!" Ann called, and her hand snatched away his. It didn't matter. He turned to her, not really seeing her, and said something that, like his greeting to the ship, he wasn't ever sure about afterward. "I was raised Orthodox, you know. Waiting for the Messiah," and then the rest were on them, with helicopters pulsing overhead and soldiers ordering everyone back, *back I said!* And Cowell was pushed into the crowd with no choice except to set himself to wait for the visitors to come out.

"Are you absolutely positive?" the president, who was given to superlatives, asked his military scientists. He had assembled them, along with the joint chiefs of staff, the cabinet, the Canadian lieutenant-governor, and a sprinkling of advisors, in the cabinet room of the White House. The same group had been meeting daily for a week, ever since the object had landed. Washington was warmer than Minnesota; outside, dahlias and chrysanthemums still bloomed on the manicured lawn. "No signal of any type issued from the craft, at any time after you picked it up on the Hubble?"

The scientists looked uncomfortable. It was the kind of question only non-scientists asked. Before his political career, the president had been a financier.

"Sir, we can't say for certain that we know all types of signals that could or do exist. Or that we had comprehensive, fixed-position monitoring of the craft at all times. As you—"

"All right, all right. Since it landed, then, and you got your equipment trained on it. No radio signals emanating from it, at any wavelength whatsoever?"

"No, sir. That's definite."

"No light signals, even in infrared or ultraviolet?"

"No, Mr. President."

"No gamma lengths, or other radioactivity?"

"No, sir."

"No quantum effects?" the president said, surprising everyone. He was not noted for his wide reading.

"Do you mean things like quantum entanglement to transport information?" the head of Livermore National Laboratory said cautiously. "Of course, we don't know enough about that area of physics to predict for certain what may be discovered eventually, or what a race of beings more advanced than ours might have discovered already."

"So there might be quantum signals going out from the craft constantly, for all you know."

The Livermore director spread his hands in helpless appeal. "Sir, we can only monitor signals we already understand."

The president addressed his chief military advisor, General Dayton. "This

shield covering the craft—you don't understand that, either? What kind of field it is, why nothing at all gets through except light?"

"Everything except electromagnetic radiation in the visible-light wavelengths is simply reflected back at us," Dayton said.

"So you can't use sonar, X-rays, anything that could image the inside?"

This time Dayton didn't answer. The president already knew all this. The whole world knew it. The best scientific and military minds from several nations had been at work on the object all week.

"So what is your recommendation to me?" the president said.

"Sir, our only recommendation is that we continue full monitoring of the craft, with full preparation to meet any change in its behavior."

"In other words, 'Wait and see.' I could have decided that for myself, without all you high-priced talent!" the president said in disgust, and several people in the room reflected with satisfaction that this particular president had only a year and three months left in office. There was no way he would be re-elected. The economy had taken too sharp a downturn.

Unless, of course, a miracle happened to save him.

"Well, go back to your labs, then," the president said, and even though he knew it was a mistake, the director of Livermore gave in to impulse.

"Science can't always be a savior, Mr. President."

"Then what good is it?" the president said, with a puzzled simplicity that took the director's breath away. "Just keep a close eye on that craft. And try to come up with some actual scientific data, for a blessed change."

ALIEN FIELD MAY BE FORM OF BOSE-EINSTEIN CONDENSATE, SAY SCIENTISTS AT STANFORD

NDBEL PRIZE WINNER RIDICULES STANFORD STATEMENT

MINNESOTA STATE COURT THROWS OUT CASE CLAIMING CONTAMINATED GROUND WATER NEAR ALIEN OBJECT

SPACE SHIELD MAY BE PENETRATED BY UNDETECTED COSMIC RAYS, SAY FRENCH SCIENTIST

SPACE-OBJECT T-SHIRTS RULED OBSCENE BY LOCAL TOURIST COUNCIL, REMOVED FROM VENDOR STANDS

NEUTRINO STREAM TURNED BACK FROM SPACE SHIELD IN EXPENSIVE HIGH-TECH FIASCO: Congress To Review All Peer-Judged Science Funding

WOMAN CLAIMS UNDER HYPNOSIS TO HEAR VOICES FROM SPACE OBJECT—KENT STATE SCIENTISTS INVESTIGATING

PRESIDENT LOSES ELECTION BY LARGEST MARGIN EVER

"MY TWIN SONS WERE FATHERED BY THE OBJECT," CLAIMS SENATOR'S DAUGHTER, RESISTS DNA TESTING Polls Show 46% Of Americans Believe Her

Jim Cowell, contemptuous of the senator's daughter, was forced to acknowledge that he had waited a lifetime for his own irrational belief to be justified. Which it never had.

"Just a little farther, Dad," Barbara said. "You okay?"

Cowell nodded in his wheelchair, and slowed it to match Barbara's pace. She wheezed a little these days; losing weight wouldn't hurt her. He had learned over the years not to mention this. Ahead, the last checkpoint materialized out of the fog. A bored soldier leaned out of the low window, his face lit by the glow of a holoscreen. "Yes?"

"We have authorization to approach the object," Cowell said. He could never think of it as anything else, despite all the names the tabloid press had hung on it over the last decades. The Alien Invader. The Space Fizzle. Silent Alien Cal.

"Approach for retina scan," the soldier said. Cowell wheeled his chair to the checker, leaned in close. "Okay, you're cleared. Ma'am? . . . Okay. Proceed." The soldier stuck his head back in the window, and the screen made one of the elaborate noises that accompanied the latest hologame.

Barbara muttered, "As if he knew the value of what he's guarding!"

"He knows," Cowell said. He didn't really want to talk to Barbara. Much as he loved her, he really would have preferred to come to this place alone. Or with Sharon, if Sharon had still been alive. But Barbara had been afraid he might have some sort of final attack alone there by the object, and of course he might have. He was pretty close to the end, and they both knew it. Getting here from Detroit was taking everything Cowell had left.

He wheeled down the paved path. On either side, autumn stubble glinted with frost. They were almost on the object before it materialized out of the fog.

Barbara began to babble. "Oh, it looks so different from pictures, even holos, so much smaller but shinier, too, you never told me it was so shiny, Dad, I guess whatever it's made of doesn't rust. But, no, of course the air isn't getting close enough to rust it, is it, there's that shield to prevent oxidation, and they never found out what *that* is composed of, either, did they, although I remember reading this speculative article that—"

Cowell shut her out as best he could. He brought his chair close enough to touch the shield. Still nothing: no tingle, no humming, no moving. Nothing at all.

That first time rushed back to him, in sharp sensory detail. The fatigue, the strain, the rustle of corn husks in the unseen wind. Hans Kleinschmidt's Styrofoam cup of coffee warm in Cowell's hand. Ann Pettie's cry *It's landing here! Run!* Cowell's own strange personal feeling of inevitability: *Of course. They wouldn't let me miss this.*

Well, they *had*. They'd let the whole world miss whatever the hell the object was supposed to be, or do, or represent. Hans was long dead. Ann was institutionalized with Alzheimer's. "Hello, ship." And the rest of his life—of many people's lives—devoted to trying to figure out the Space Super Fizzle.

That long frustration, Cowell thought, had showed him one thing, anyway. There was no mystery behind the mystery, no unseen Plan, no alien messiah for humanity. There was only this blank object sitting in a field, stared at by a shrill middle-aged woman and a dying man. What you see is what you get. He, James Everett Cowell, had been a fool to ever hope for anything else.

"Dad, why are you smiling like that? Don't, please!"

"It's nothing, Barbara."

"But you looked—"

"I said, 'It's nothing.'"

Suddenly he was very tired. It was cold out here, under the gray sky. Snow was in the air.

"Honey, let's go back now."

They did, Barbara walking close by Cowell's chair. He didn't look back at the object, silent on the fallow ground.

Transmission: There is nothing here yet.

Current probability of occurrence: 67%.

II: 2090

The girl, dressed in home-dyed blue cotton pants and a wolf pelt bandeau, said suddenly, "Tam—what's *that*?"

Tam Wilkinson stopped walking, although his goat herd did not. The animals moved slowly forward, pulling at whatever tough grass they could find on the parched ground. Three-legged Himmie hobbled close to the herd leader; blind Jimmie turned his head in the direction of Himmie's bawl. "What's what?" the boy said.

"Over there, to the north . . . no, *there*."

The boy shaded his eyes against the summer sun, hot under the thin clouds. He and Juli would have to find noon shade for the goats soon. Tam's eyes weren't strong, but by squinting and peering, he caught the glint of sunlight on something dull silvery. "I don't know."

"Let's go see."

Tam looked bleakly at Juli. They had married only a few months ago, in the spring. She was so pretty, hardly any deformity at all. The doctor from St. Paul had issued her a fertility certificate at only fourteen. But she was impulsive. Tam, three years older, came from a family unbroken since the Collapse. They hadn't accomplished that by impulsive behavior.

"No, Juli. We have to find shade for the goats."

"It could be shade. O, or even a machine with some good metal on it!"

"This whole area was stripped long ago."

"Maybe they missed something."

Tam considered. She could be right; since their marriage, he and Juli had brought the goats pretty far beyond their usual range. Not many people had ventured into the Great Northern Waste for pasturage. The whole area had been too hard hit at the Collapse, leaving the soil too contaminated and the standing water even worse. But the summer had been unusually rainy, creating the running water that was so much safer than ponds or lakes, and anyway Tam and Juli had delighted in being alone. Maybe there *was* a forgotten machine with usable parts still sitting way out here, from before the Collapse. What a great thing to bring home from his honeymoon!

"Please," Juli said, nibbling his ear, and Tam gave in. She was so pretty. In Tam's entire family, no women were as pretty, nor as nearly whole, as Juli. His sister Nan was loose-brained, Calie had only one arm, Jen was blind, and Suze could not walk. Only Jen was fertile, even though the Wilkinson farm was near neither lake nor city. The farm still sat in the

path of the west winds coming from Grand Forks. When there had been a Grand Forks.

Tam and Juli walked slowly, herding the goats, toward the glinting metal. The sun glared pitilessly by the time they reached the object, but the thing, whatever it was, stood beside a stand of scrawny trees in a little dell. Tam drove the goats into the shade. His practiced eye saw that once there had been water here, but no longer. They would have to move on by early afternoon.

When the goats were settled, the lovers walked hand-in-hand toward the object. "O," Juli said, "it's an egg! A metal egg!" Suddenly she clutched Tam's arm. "Is it . . . do you think it's a polluter?"

Tam felt growing excitement. "No—I know what this is! Gran told me, before she died!"

"It's not a polluter?"

"No, it . . . well, actually, nobody knows exactly what it's made of. But it's safe, dear love. It's a miracle."

"A what?" Juli said.

"A miracle." He tried not to sound superior; Juli was sensitive about her lack of education. Tam was teaching her to read and write. "A gift directly from God. A long time ago—a few hundred years, I think, anyway before the Collapse—this egg fell out of the sky. No one could figure out why. Then one day a beautiful princess touched it, and she got pregnant and bore twin sons."

"Really?" Juli breathed. She ran a few steps forward, then considerably slowed for Tam's halting walk. "What happened then?"

Tam shrugged. "Nothing, I guess. The Collapse happened."

"So this egg, it just sat here since then? Come on, sweet one, I want to see it up close. It just sat here? When women try so hard, us, to get pregnant?"

The boy didn't like the skeptical tone in her voice. He was the one with the educated family. "You don't understand, Juli. This thing didn't make everybody pregnant, just that one princess. It was a special miracle from God."

"I thought you told me that before the Collapse, nobody needed no miracles to get pregnant, because there wasn't no pollutants in the water and air and ground?"

"Yes, but—"

"So then when this princess got herself pregnant, why was it such a miracle?"

"Because she was a virgin, loose-brain!" After a minute he added, "I'm sorry."

"I'm going to look at the egg," Juli said stiffly, and this time she ran ahead without waiting.

When Tam caught up, Juli was sitting cross-legged in prayer in front of the egg. It was smaller than he had expected, no bigger than a goat shed, a slightly irregular oval of dull silver. Around it the ground shimmered with heat. Minnesota hadn't always been so hot, Gran had told Tam in her papy old-lady voice, and he suddenly wondered what this place had looked like when the egg fell out of the sky.

Could it be a polluter? It didn't look like it manufactured anything, and certainly Tam couldn't see any plastic parts to it. Nothing that could flake off in bits too tiny to see and get into the air and water and wind and living bodies. Still, if they were so very small, these dangerous pieces of plastic . . . "en-

doctrine mimickers," Gran had taught Tam to call them, though he had no idea what the words meant. Doctors in St. Paul knew, probably. Although what good was knowing, if you couldn't fix the problem and make all babies as whole as Juli?

She sat saying her prayer beads so fervently that Tam was annoyed with her all over again. Really, she just wasn't steady. Playful, then angry, then prayerful . . . she'd better be more reliable than that when the babies started to come. But then Juli raised her eyes to him, lake-blue, and appealed to his greater knowledge, and he softened again.

"Tam . . . do you think it's all right to pray to it? Since it did come from God?"

"I'm sure it's all right, honey. What are you praying for?"

"Twin sons, like the princess got." Juli scrambled to her feet. "Can I touch it?"

Tam felt sudden fear. "No! No—better not. *I* will, instead." When those twin sons came, he wanted them to be of his seed, not the egg's.

Cautiously the boy put out one hand, which stopped nearly a foot away from the silvery shell. Tam pushed harder. He couldn't get any closer to the egg. "It's got an invisible wall around it!"

"Really? Then can I touch it? It's not really touching the egg!"

"No! The wall is all the princess must have touched, too."

"Maybe the wall, it wasn't there a long time ago. Maybe it grew, like crops."

Tam frowned, torn between pride and irritation at her quick thought. "Don't touch it, Juli. After all, for all we know, you might already be pregnant."

She obeyed, stepping back and studying the object. Suddenly her pretty face lit up. "Tam! Maybe it's a miracle for us, too! For the whole family!"

"The whole—"

"For Nan and Calie and Suze! And your cousins, too! O, if they come here and touch the egg—or the egg wall—maybe they can get pregnant like the princess did, straight from God!"

"I don't think—"

"If we came back before winter, in easy stages, and knowing ahead of time where the water was, they could all get pregnant! You could talk them into it, dear heart! You're the only one they listen to, even your parents. The only one who can make plans and carry out them plans. You know you are."

She looked at him with adoration. Tam felt something inside him glow and expand. And O, she really was quick, even if she couldn't read or write. His parents were old, at least forty, and they'd never been as quick as Tam. That was why Gran had taught him so much directly, all sorts of things she'd learned from her grandmother, who could remember the Collapse.

He said, with slow weightiness, "If the workers in the family stayed to raise crops, we could bring the goats and the infertile women . . . in easy stages, I think, before fall. Provided we map ahead of time where the safe water is."

"O, I know you can!"

Tam frowned thoughtfully, and reached out again to touch the silent, unreachable egg.

Just before the small expedition left the Wilkinson farm, Dr. Sutter showed up on his dirtbike.

Why did he have to come now? Tam didn't like Dr. Sutter, who always acted so superior. He biked around the farms and villages, supposedly "helping people,"—O, he did help some people, maybe, but not Tam's family, who *were* their village. Not really helped. O, he'd brought drugs for Gran's aching bones, and for Suze's fever, from the hospital in St. Paul. But he hadn't been able to stop Tam's sisters—or anybody else—from being born the way they were, and not all his "medical training" could make Suze or Nan or Calie fertile. And Dr. Sutter lorded it over Tam, who otherwise was the smartest person in the family.

"I'm afraid," Suze said. She rode the family mule; the others walked. Suze and Calie; Nan, led by Tam's cousin Jack; Uncle Seddie and Uncle Ned, both armed; Tam and Juli. Juli stood talking, sparkly eyed, to Sutter. To Tam's disappointment, no baby had been started on the honeymoon.

He said, "Nothing to be afraid of, Suze. Juli! Time to go!"

She danced over to him. "Dave's coming, too! He says he got a few weeks' vacation and would like to see the egg. He knows about it, Tam!"

Of course he did. Tam set his lips together and didn't answer.

"He says it's from people on another world, not from God, and—"

"My gran said it was from God," Tam said sharply. At his tone, Juli stopped walking.

"Tam—"

"I'll speak to Sutter myself. Telling you these city lies. Now go walk by Suze. She's afraid."

Juli, eyes no longer sparkling, obeyed. Tam told himself he was going to go over and have this out with Sutter, just as soon as he got everything going properly. Of *course* the egg was from God! Gran had said so, and anyway, if it wasn't, what was the point of this whole expedition, taking workers away from the farm, even if it was the mid-summer quiet between planting and harvest.

But somehow, with one task and another, Tam didn't find time to confront Sutter until night, when they were camped by the first lake. Calie and Suze slept, and the others sat around a comfortable fire, full of corn mush and fresh rabbit. Somewhere in the darkness, a wolf howled.

"Lots more of those than when I was young," said Uncle Seddie, who was almost seventy. "Funny thing, too—when you trap 'em, they're hardly ever deformed. Not like rabbits or frogs. Frogs, they're the worst."

Sutter said, "Wolves didn't move back down to Minnesota until after the Collapse. Up in Canada, they weren't as exposed to endocrine-mimicking pollutants. And frogs have always been the worst; water animals are especially sensitive to environmental factors."

Some of the words were the same ones Gran had used, but that didn't make Tam like them any better. He didn't know what they meant, and he wasn't about to ask Sutter.

Juli did, though. "Those endo . . . endo . . . what are they, doctor?"

He smiled at her, his straight white teeth gleaming in the firelight. "Environmental pollutants that bind to receptor sites all over the body, disrupting its normal function. They especially affect fetuses. Just before the Collapse, they reached some sort of unanticipated critical mass, and suddenly there were worldwide fertility problems, neurological impairments, cerebral. . . . Sorry, Juli, you got me started on my medical diatribe. I mean, pretty lady, that too few babies were born, and too many of those who were born couldn't think or move right, and we had the Collapse."

Beside him, Nan, born loose-brained, crooned softly to herself.

Juli said innocently, "But I thought the Collapse, it came from wars and money and bombs and things like that."

"Yes," Sutter said, "but those things happened *because* of the population and neurological problems."

"O, I'm just glad I didn't live then!" Ned said, shuddering. "It must have been terrible, especially in the cities."

Juli said, "But, doctor, aren't you from a city?"

Sutter looked into the flames. The wolf howled again. "Some cities fared much better than others. We lost most of the East Coast, you know, to various terrorist wars, and—"

"Everybody knows that," Tam said witheringly.

Sutter was undeterred, "—and California to rioting and looting. But St. Paul came through, eventually. And a basic core of knowledge and skills persisted, even if only in the urban areas. Science, medicine, engineering. We don't have the skilled population, or even a neurologically functional population, but we haven't really gone pre-industrial. There are even pockets of research, especially in biology. We'll beat this, someday."

"I know we will!" Juli said, her eyes shining. She was always so optimistic. Like a child, not a grown woman.

Tam said, "And meanwhile, the civilized types like you graciously go around to the poor country villages that feed you and bless them with your important skills."

Sutter looked at him across the fire. "That's right, Tam."

Uncle Seddie said, "Enough arguing. Go to bed, everybody."

Seddie was the ranking elder; there was no choice but to obey. Tam pulled Juli up with him, and in their bedroll he copulated with her so hard that she had to tell him to be more gentle, he was hurting her.

They reached the egg, by the direct route Tam had mapped out, in less than a week. Another family already camped beside it.

The two approached each other warily, guns and precious ammunition prominently displayed. But the other family, the Janeways, turned out to be a lot like the Wilkinsons, a goat-and-farm clan whose herdsmen had discovered the egg and brought others back to see the God-given miracle.

Tam, standing behind Seddie and Ned, said, "There's some that don't think it is from God."

The ranking Janeway, a tough old woman lean as Gran had been, said sharply, "Where else could it come from, way out here? No city tech left this here."

"That's what we say," Seddie answered. He lowered his rifle. "You people willing to trade provisions? We got maple syrup, corn mush, some good pepper."

"Pepper?" The old woman's eyes brightened. "You got pepper?"

"We trade with a family that trades in St. Paul," Ned said proudly. "Twice a year, spring and fall."

"We got sugar and an extra radio."

Tam's chin jerked up. A radio! But that was worth more than any amount of provisions. Nobody would casually trade a radio.

"Our family runs to boys, nearly all boys," the old woman said, by way of explanation. She looked past Tam, at Juli and Calie and Suze and Nan, hanging back with the mule and backpacks. "They're having trouble find-

ing fertile wives. If any of your girls . . . and if the young people liked each other . . ."

"Juli, the blonde, she's married to Tam here," Seddie said. "And the other girls, they aren't fertile . . . yet."

"Yet?" What do you mean, 'yet'?"

Seddie pointed with his rifle at the egg. "Don't you know what that is?"

"A gift from God," the woman said.

"Yes. But don't you know about the princess and her twins? Tell her, Tam."

Tam told the story, feeling himself thrill to it as he did so. The woman listened intently, then squinted again at the girls. Seddie said quickly, "Nan is loose-brained, I have to tell you. And Suze is riding because her foot is crippled, although she's got the sweetest, meekest nature you could ever find. But Calie there, even though she's got a withered arm, is quick and smart and can do almost anything. And after she touches the egg. . . but, ma'am, Wilkinsons don't force marriages on our women. Never. Calie'd have to like one of your sons, and want to go with you."

"O, we can see what happens," the woman said, and winked, and for a second Tam saw what she must have been once, long ago, on a sweet summer night like this one when she was young.

He said suddenly, "The girls have to touch the egg at dawn."

Seddie and Ned turned to him. "Dawn? Why dawn?"

Tam didn't know why he'd said that, but now he had to see it through. "I don't know. God just made that idea come to me."

Seddie said to Mrs. Janeway, "Tam's our smartest person. Always has been."

"All right, then. Dawn."

In the chill morning light, the girls lined up, shivering. Mrs. Janeway, Dr. Sutter, and the men from both families made an awkward semi-circle around them, shuffling their feet a little, not looking at each other. The five Janeway boys, a tangle of uncles and cousins, all looked a bit stooped, but they could all walk, and none were loose-brained. Tam had spent the previous evening at the communal campfire, saying little, watching and listening to see which Janeways might be good to his sisters. He'd already decided that Cal had a temper, and if he asked Uncle Seddie for Calie or Suze, Tam would advise against it.

Dr. Sutter had said nothing at the campfire, listening to the others become more and more excited about the egg-touching, about the fertility from God. Even when Mrs. Janeway had asked him questions, his replies had been short and evasive. She'd kept watching him, clearly suspicious. Tam had liked her more and more as the long evening progressed.

Followed by a longer night. Tam and Juli had argued.

"I want to touch it, too, Tam."

"No. You have your certificate from that doctor two years ago. She tested you, and you're already fertile."

"Then why haven't I started no baby? Maybe the fertility went away."

"It doesn't do that."

"How do you know? I asked Dr. Sutter and he said—"

"You told Dr. Sutter about your body?" Rage swamped Tam.

Juli's voice grew smaller. "O, he is a doctor! Tam, he says it's hard to be sure about fertility testing for women, the test is . . . is some word I don't re-

member. But he says about one certificate in four is wrong. He says we should do away with the certificates. He says—"

"I don't care what he says!" Tam had all but shouted. "I don't want you talking to him again! If I see you are, Juli, I'll take it up with Uncle Seddie. And you are not touching the egg!"

Juli had raised herself on one elbow to stare at him in the starlight, then had turned her back and pretended to sleep until dawn.

Now she led Nan, the oldest sister, toward the egg. Nan crooned, drooling a little, and smiled at Juli. Juli was always tender with Nan. She smiled back, wiped Nan's chin, and guided her hand toward the silvery oval. Tam watched carefully to see that Juli didn't touch the egg herself. She didn't, and neither did Nan, technically, since her hand stopped at whatever unseen wall protected the object. But everyone let out a sharp breath, and Nan laughed suddenly, one of her clear high giggles, and Tam felt suddenly happier.

Seddie said, "Now Suze."

Juli led Nan away. Suze, carried by Uncle Ned, reached out and touched the egg. She, too, laughed aloud, her sweet face alight, and Tam saw Vic Janeway lean forward a little, watching her. Suze couldn't plow or plant, but she was the best cook in the family if everything were put in arm's reach. And she could sew and weave and read and carve.

Next Calie, pretty if Juli hadn't been there for comparison, and the other four Janeway men watched. Calie's one hand, dirt under the small fingernails, stayed on the egg a long time, trembling.

No one spoke.

"O, then," Mrs. Janeway said, "we should pray."

They did, each family waiting courteously while the other said their special prayers, all joining in the "Our Father." Tam caught Sutter looking at him somberly, and he glared back. Nothing Sutter's "medicine" had ever done had helped Tam's sisters, and anyway, it was none of Sutter's business what the Wilkinsons and Janeways did. Let him go back to St. Paul with his heathen beliefs.

"I want to touch the egg," Juli said. "I won't get no other chance. We leave in the morning."

Tam had had no idea that she could be so stubborn. She'd argued and pleaded for the three days they'd camped with the Janeways, letting the families get to know each other. Now they were leaving in the morning, with Vic and Lenny Janeway traveling with them to stay until the end of harvest, so Suze and Calie could decide about marriage. And Juli was still arguing!

"I said no," Tam said tightly. He was afraid to say more—afraid not of her, but of himself. Some men beat their wives; not Wilkinson men. But watching Juli all evening, Tam had suddenly understood those other men. She had deliberately sat talking only to Dr. Sutter, smiling at him in the flickering firelight. Even Uncle Ned had noticed, Tam thought, and that made Tam writhe with shame. He had dragged Juli off to bed early, and here she was arguing still, while singing started around the fire twenty feet away.

"Tam . . . please! I want to start a baby, and nothing we do started one. . . . Don't get upset, but . . . but Dr. Sutter says sometimes the man is infertile, even though it don't happen as often as women's wombs it can still happen, and maybe—"

It was too much. First his wife shames him by spending the evening sit-

ting close to another man, talking and laughing, and then she suggests that *him*, not her, might be the reason there was no baby yet. Him! When God had clearly closed the wombs of women after the Collapse, just like he did to those sinning women in the Bible! Anger and shame thrilled through Tam, and before he knew he was going to do it, he hit her.

It was only a slap. Juli put her hand to her cheek, and Tam suddenly would have given everything he possessed to take the slap back. Juli jumped up and ran off in the darkness, away from the fire. Tam let her go. She had a right to be upset now, he'd given her that. He lay stiffly in the darkness, intending every second to go get her—there were wolves out there, after all, although they seldom attacked people. Still, he would go get her. But he didn't, and, without knowing it, he fell asleep.

When he woke, it was near dawn. Juli woke him, creeping back into their bedroll.

"Juli! You . . . it's nearly dawn. Where were you all this time?"

She didn't answer. In the icy pale light, her face was flushed.

He said slowly, "You touched it."

She wriggled the rest of the way into the bedroll and turned her back to him. Over her shoulder she said, "No, Tam. I didn't touch it."

"You're lying to me."

"No. I didn't touch it," she repeated, and Tam believed her. So he had won. Generosity filled him.

"Juli—I'm sorry I hit you. So sorry."

Abruptly she twisted in the bedroll to face him. "I know. Tam, listen to me. . . . God wants me to start a baby. He does!"

"Yes, of course," Tam said, bewildered by her sudden ferocity.

"He wants me to start a baby!"

"Are you . . . are you saying that you have?"

She was silent a long time. Then she said, "Yes. I think so."

Joy filled him. He took her in his arms, and she let him. It would all be right, now. He and Juli would have a child, many children. So would Suze and Calie, and—who could say?—maybe even Nan. The egg's fame would grow, and there would be many babies again.

On the journey home, Juli stuck close to Tam, never looking even once in Dr. Sutter's direction. He avoided her, too. Tam gloated; so much for science and tech from the cities! When they reached the farm, Dr. Sutter retrieved his dirtbike and rode away. The next time a doctor came to call, it was someone different.

Juli bore a girl, strong and whole except for two missing fingers. During her marriage to Tam, she bore four more children, finally dying while trying to deliver a sixth one. Suze and Calie married the Janeway boys, but neither conceived. After three years of trying, Lenny Janeway sent Calie back to the Wilkinsons; Calie never smiled or laughed much again.

For decades afterward, the egg was proclaimed a savior, a gift from God, a miracle to repopulate Minnesota. Families came and feasted and prayed, and the girls touched the egg, more each year. Most of the girls never started a baby, but a few did, and at times the base of the egg was almost invisible under the gifts of flowers, fruit, woven cloth, even a computer from St. Paul and a glass perfume bottle from much farther away, so delicate that the wind smashed it one night. Or bears did, or maybe even angels. Some people said that angels visited the egg regularly. They said that the angels even touched it, through the invisible wall.

Tam's oldest daughter didn't believe that. She didn't believe much, Tam thought, for she was the great disappointment of his life. Strong, beautiful, smart, she got herself accepted to a merit school in St. Paul, and she went, despite her missing fingers. She made herself into a scientist and turned her back on the Bible. Tam, who had turned more stubborn as he grew old, refused to see her again. She said that the egg wasn't a miracle and had never made anyone pregnant. She said there were no saviors for humanity but itself.

Tam, who had become not only more stubborn but also more angry after Juli died, turned his face away and refused to listen.

**Transmission: There is nothing here yet.
Current probability of occurrence: 28%.**

III: 2175

Abby4 said, "The meeting is in northern Minnesota? Why?"

Mal held onto his temper. He'd been warned about Abby4. *One of the Biomensas*, Mal's network of friends and colleagues had said, *In the top 2 percent of genemods. She likes to throw around her superiority. Don't let her twist you. The contract is too important.*

His friends had also said not to be intimidated by either Abby4's office or her beauty. The office occupied the top floor of the tallest building in Raleigh, with a sweeping view of the newly cleaned-up city. A garden in the sky, its walls and ceiling were completely hidden by the latest genemod plants from AbbyWorks, flowers so exotic and brilliant that, just looking at them, a visitor could easily forget what he was going to say. Probably that was the idea.

Abby4's beauty was even more distracting than her office. She sat across from him in a soft white chair that only emphasized her sleek, hard glossiness. The face of an Aztec princess, framed by copper hair pulled into a thick roll on either side. The sash of her black business suit stopped just above the swell of white breasts that Mal determinedly ignored. Her legs were longer than his dreams.

Mal said pleasantly, "The meeting is in northern Minnesota because the Chinese contact is already doing business in St. Paul, at the university. And he wants to see a curiosity near the old Canadian border, an object that government records show as an alien artifact."

Abby4 blinked, probably before she knew that she was going to do it, which gave Mal enormous satisfaction. Not even the Biomensas, with their genetically engineered intelligence and memory, knew everything.

"Ah, yes, of course," Abby4 said, and Mal was careful not to recognize the bluff. "O, then, northern Minnesota. Send my office system the details, please. Thank you, Mr. Goldstone."

Mal rose to go. Abby4 did not rise. In the outer office, he passed a woman several years older than Abby4 but looking so much like her that it must be one of the earlier clones. The woman stooped slightly. Undoubtedly each successive clone had better genemods as the technology came onto the market. AbbyWorks was, after all, one of the five or six leading biosolutions companies in Raleigh, and that meant in the world.

Mal left the Eden-like AbbyWorks building to walk into the shrouding

heat of a North Carolina summer. In the parking lot, his car wouldn't start. Cursing, he opened the hood. Someone had broken the hood lock and stolen the engine.

Purveyors of biosolutions to the world, Mal thought bitterly, cleaners-up of the ecological, neurological, and population disasters of the Collapse, and we still can't create a decent hood lock! O, that actually figured. For the last hundred and fifty years—no, closer to two hundred now—the best minds of each American generation had been concentrating on biology. Engineering, physics, and everything else got few practitioners, and even less funding.

O, it had paid off. Not only for people like Abby4, the beautiful Biomensa bitch, but even for comparative drones like Mal. He had biological defenses against lingering environmental pollutants (they would linger for another thousand years), he was fertile, he even had modest genemods so that he didn't look like a troll or think like a troglodyte. What he *didn't* have was a working car.

He took out his phone and called a cab.

August in Minnesota was not cold, but Kim Mao Xun, the Chinese client, was well wrapped in layers of silk and thin wool. He looked very old, which meant that he was probably even older. Obviously no genemods for appearance, Mal thought, whatever else Mr. Kim might have. O, they did things differently in China! When you survived the Collapse on nothing but sheer numbers, you started your long climb back with essentials, nothing else.

"I am so excited to see the Alien Craft," he said in excellent English. "It is famous in China, you know."

Abby4 smiled. "Here, I'm afraid, it's mostly a curiosity. Very few people even know it exists, although the government has authenticated from written records that it landed in October 2007, an event widely recorded by the best scientific instruments of the age."

"So much better than what we have now," Mr. Kim murmured, and Abby4 frowned.

"O, yes, I suppose . . . but then, they didn't have a world to clean up, did they?"

"And we do. Mr. Goldstone tells me you can help us do this in Shanghai."

"Yes, we can," Abby4 said, and the meeting began to replicate in earnest.

Mal listened intently, taking notes, but said nothing. Meeting brokers didn't get involved in details. Matching, arranging, follow-through, impartial evaluation, and, if necessary, arbitration. Then disappear until the next time. But Mal was interested; this was his biggest client so far.

And the biggest problem: Shanghai. The city and the harbor, which must add up to hundreds of different pollutants, each needing a different genetically designed organism to attack it. Plus, Shanghai had been viral-bombed during the war with Japan. Those viruses would be much mutated by now, especially if they had jumped hosts, which they probably had. Mal could see that even Abby4 was excited by the scope of the job, although she was trying to conceal it.

"What is Shanghai's current population, Mr. Kim?"

"Zero." Mr. Kim smiled wryly. "Officially, anyway. The city is quarantined. Of course, there are the usual stoopers and renegades, but we will do our best to relocate them before you begin, and those who will not go may be ignored by your operators."

Something chilling in that. Although did the US do any better? Mal had

heard stories—everyone had heard stories—of families who'd stayed in the most contaminated areas for generations, becoming increasingly deformed and increasingly frightening. There were even people still living in places like New York City, which had taken the triple blow of pollutants, bioweapons, and radiation. Theoretically, the population of New York City was zero. In reality, nobody would go in to count, nor even send in the doggerels, biosolutioned canines with magnitude-one immunity and selectively enhanced intelligence. A doggerel was too expensive to risk in New York. Whoever—or whatever—couldn't be counted by robots (and American robots were so inadequate compared to the Asian product), stayed uncounted.

"I understand," Abby4 said to Mr. Kim. "And the time-frame?"

"We would like to have Shanghai totally clean ten years from now."

Abby4's face didn't change. "That is very soon."

"Yes. Can you do it?"

"I need to consult with my scientists," she said, and Mal felt his chest fill with lightness. She hadn't said no, and when Abby4 didn't say no, the answer was likely to be yes. The ten-year deadline—only ten years!—would make the fee enormous, and Mal's company's small percentage of it would rise accordingly. A promotion, a bonus, a new car. . . .

"Then until I hear back from you, we can go no farther," Mr. Kim said. "Shall we take my car to the Alien Craft?"

"Certainly," Abby4 said. "Mr. Goldstone? Can you accompany us? I'm told you know exactly where this curious object is." *As a busy and important Biomensa executive like me would not*, was the unstated message, but Mal didn't mind. He was too happy.

The Alien Craft, as Mr. Kim persisted in calling it, was not easy to find. Northern Minnesota had all been cleaned up, of course; as valuable farm and dairy land, it had had priority, and anyway, the damage hadn't been too bad. But, once cleaned, the agrisolution companies wanted the place for farming, free of outside interference. The government, the weak partner in all that biotech corporations did, reluctantly agreed. The Alien Craft lay under an inconspicuous foamcast dome at the end of an obscure road, with no identifying signs of any kind.

Mal saw immediately why Mr. Kim had suggested going in his car, which had come with him from China. The Chinese were forced to buy all their biosolutions from others. In compensation, they had created the finest engineering and hard-goods manufactories in the world. Mr. Kim's car was silent, fast, and computer-driven, technology unknown in the United States. Mal could see that even Abby4 was unwillingly impressed.

He leaned back against the contoured seats, which molded themselves to his body, and watched farmland flash past at an incredible rate. There were government officials and university professors who said that the United States should fear Chinese technology, even if it wasn't based on biology. Maybe they were right.

In contrast, the computer-based security at the Alien Craft looked primitive. Mal had arranged for entry, and they passed through the locks into the dome, which was only ten feet wider on all sides than the Alien Craft itself. Mal had never seen it before, and despite himself, he was impressed.

The Craft was dull silver, as big as a small bedroom, a slightly irregular oval. In the artificial light of the dome, it shimmered. When Mal put out a hand to touch it, his hand stopped almost a foot away.

"A force field of some unknown kind, unknown even before the Collapse," Abby4 said, with such authority you'd think she'd done field tests herself. "The shield extends completely around the Craft, even below ground, where it is also impenetrable. The Craft was very carefully monitored in the decades between its landing and the Collapse, and never once did any detectable signal of any kind go out from it. No outgoing signals, no aliens disembarking, no outside markings to decode . . . no communication of any kind. One wonders why the aliens bothered to send it at all."

Mr. Kim quoted, "The wordless teaching, the profit in not doing—not many people understand it."

"Ah," Abby4 said, too smart to either agree or disagree with a philosophy—Taoist? Buddhist?—she patently didn't share.

Mal walked completely around the Craft, wondering himself why anybody would bother with such a tremendous undertaking without any follow-up. Of course, maybe it hadn't been tremendous to the *aliens*. Maybe they sent interstellar silvery metal ovals to other planets all the time without follow-up. But *why*?

When Mal reached his starting point in the circular dome, Mr. Kim was removing an instrument from his leather bag.

Mal had never seen an instrument like it, but then, he'd hardly seen any scientific instruments at all. This one looked like a flat television, with a glass screen on one side, metal on the other five. Only the "glass" clearly *wasn't*, since it seemed to shift as Mr. Kim lifted it, as if it were a field of its own. As Mal watched, Mr. Kim applied the field side of the device onto the side of the Craft, where it stayed even as he stepped back.

Mal said uncertainly, "I don't think you should—"

Abby4 said, "O, it doesn't matter, Mr. Goldstone. Nothing anyone has ever done has penetrated the Craft's force field, even before the Collapse."

Mr. Kim just smiled.

Mal said, "You don't understand. The clearance I arranged with the State Department . . . it doesn't include taking any readings or . . . or whatever that device is doing. Mr. Kim?"

"Just taking some readings," Mr. Kim said blandly.

Mal's unease grew. "Please stop. As I say, I didn't obtain clearances for this!"

Abby4 scowled at him fiercely. Mr. Kim said, "Of course, Mr. Goldstone," and detached his device. "I am sorry to alarm you. Just some readings. Shall we go now? A most interesting object, but rather monotonous."

On the way back to St. Paul, Mr. Kim and Abby4 discussed the historic clean-ups of Boston, Paris, and Lisbon, as if nothing had happened.

What had?

AbbyWorks got the Shanghai contract. Mal got his promotion, his bonus, and his new car. Someone else handled the follow-up for the contract while Mal went on to new projects, but every so often, he checked to see how the clean-up of Shanghai was proceeding. Two years into the agreement, the job was actually ahead of projected schedule, despite badly deteriorating relations between the two countries. China invaded and annexed Tibet, but China had *always* invaded and annexed Tibet, and only the human-solidarity people objected. Next, however, China annexed the Kamchatka Peninsula, where American biosolutions companies were working on the clean-up of Vladivostock. The genemod engineers brought back frightening stories of advanced Chinese engineering: room-temperature superconductors. Maglev

trains. Nanotechnology. There were even rumors of quantum computers, capable of handling trillions of operations simultaneously, although Mal discounted those rumors completely. A practical quantum computer was still far over the horizon.

AbbyWorks was ordered out of Shanghai by the United States government. The company did not leave. Abby1 was jailed, but this made no difference. The Shanghai profits were paid to offshore banks. AbbyWorks claimed to have lost control of its Shanghai employees, who were making huge personal fortunes, enough to enable them to live outside the United States for the rest of very luxurious lives. Then, abruptly, the Chinese government itself terminated the contract. They literally threw AbbyWorks out of China in the middle of the night. They kept for themselves enormous resources in patented scientific equipment, as well as monies due for the last three months' work, an amount equal to some state budgets.

At three o'clock in the morning, Mal received a visit from the Office of National Security.

"Mallings Goldstone?"

"Yes?"

"We need to ask you some questions."

Recorders, intimidation. The ONS had information that in 2175, Mr. Goldstone had conducted two people to the Minnesota site of the space object: Abby4 Abbington, president of AbbyWorks Biosolutions, and Mr. Kim Mao Xun of the Chinese government.

"Yes, I did," Mal said, sitting stiffly in his nightclothes. "It's on record. I had proper clearances."

"Yes. But during that visit, did Mr. Kim take out and attach to the space object an unknown device, and then return it to his briefcase?"

"Yes." Mal's stomach twisted.

"Why wasn't this incident reported to the State Department?"

"I didn't think it was important." Not entirely true. Abby4 must have reported it . . . but why *now*? Because of the lost monies and confiscated equipment, of course. Adding to the list of Chinese treacheries; a longer list was more likely to compel government reaction.

"Do you have any idea what the device was, or what it might have done to the space object?"

"No."

"Then you didn't rule out that its effects might have been dangerous to your country?"

"Dangerous? How?"

"We don't know, Mr. Mallings—that's the point. We do know that in non-biological areas the Chinese technology is far ahead of our own. We have no way of knowing if that device you failed to report turned the space object into a weapon of some kind."

"A weapon? Don't you think that's very unlikely?"

"No, Mr. Mallings. I don't. Please get dressed and come with us."

For the first time, Mal noticed the two men's builds. Genemod for strength and agility, no doubt, as well as maximum possible longevity. He remembered Mr. Kim, scrawny and wrinkled. Their bodies far outclassed Mr. Kim's, far outclassed Mal's as well. But Mr. Kim's body was somewhere on the other side of the world, along with his superior "devices," and Mal's body was marked "scapegoat" as clearly as if it were spelled out in DNA-controlled birthmarks on his forehead.

He went into his bedroom to get dressed.

Mal had been interrogated with truth drugs—painless, harmless, utterly reliable—recorded, and released by the time the news hit the flimsies. He had already handed in his resignation to his company. The moving truck stood outside his apartment, being loaded for the move to someplace he wasn't known. Mal, flimsy in hand, watched the two huge stevies carry out his furniture.

But he couldn't postpone reading the flimsy forever. And, of course, this was just the first. There would be more. The tempaper rustled in his hand. It would last forty-eight hours before dissolving into molecules completely harmless to the environment.

CHINESE ARMED "SPACE OBJECT" TO DESTROY US!!!
"MIGHT BE RADIATION, OR POLLUTANTS, OR A SUPER-BOMB,"
SAY SCIENTISTS

TROJAN HORSE UNDER GUISE OF BIOSOLUTIONS CONTRACT
TWO YEARS AND NOTHING HAS BEEN DONE!!!!

Flimsies weren't subtle. But so far as Mal could see, his name hadn't yet been released to them.

Mal said, "Please be careful with that desk, it's very old. It belonged to my great-grandfather."

"O, yes, friend," one of the stevies said. "Most careful." They hurled it into the truck.

A neighbor of Mal's walked toward Mal, recognized him, and stopped dead. She hissed at him, a long ugly sound, and walked on.

So some other flimsy had already tracked him down and published his name.

"Leave the rest," Mal said suddenly, "everything else inside the house. Let's go."

"O, just a few crates," said one stevie.

"No, leave it." Mal climbed into the truck's passenger cubicle. He hoped that he wasn't a coward, but like all meeting brokers he was an historian, and he remembered the historical accounts of the "Anti-Polluters' Riots" of the Collapse. What those mobs had done to anyone suspected of contributing to the destruction of the environment . . . Mal pulled the curtains closed in the cubicle. "Let's go!"

"O, yes!" the stevies said cheerfully, and drove off.

Mal moved five states away, pursued all the way by flimsies. He couldn't change his retinal scan or DNA ID, of course, but he used a legal corporate alias with the new landlord, the grocery broker, the bank. He read the news every day, and listened to it on public radio, and it progressed as any meeting broker could foresee it would.

First, set the agenda: Demonize the Chinese, spread public fear. Second, canvass negotiating possibilities: Will they admit it? What can we contribute? Third, eliminate the possibilities you don't like and hone in on the one you do: If the United States has been attacked, it has the right to counterattack. Fourth, build in safeguards against failure: We can't yet attack China, they'll destroy us. We *can* attack the danger they've placed within our borders, and then declare victory for that. Fifth, close the deal.

The evacuation started two weeks later, and covered most of northern Minnesota and great swathes of southern Ontario. It included people and farm animals, but not wildlife, which would, of course, be replaced from

cloned embryos. As the agrisolution inhabitants, many protesting furiously, were trucked out, the timed-release drops of engineered organisms were trucked in. Set loose after the bomb, they would spread over the entire affected area and disassemble all radioactive molecules. They were the same biosolutions that had cleaned up Boston, the very best AbbyWorks could create. In five years, Minnesota would be as sweet and clean as Kansas.

Or Shanghai.

The entire nation, Mal included, watched the bomb drop on vid. People held patriotic parties; wine and beer flowed. We were showing the Chinese that they couldn't endanger us in our own country! Handsome genemod news speakers, who looked like Viking princesses or Zulu warriors or Greek gods, speculated on what the space object might reveal when it was blasted open. If anything survived, of course, which was not likely . . . and here scientists, considerably less gorgeous than the news speakers, explained fusion and the core of the sun. The bomb might be antiquated technology, they said, but it was still workable, and would save us from Chinese perfidy.

Not to mention, Mal thought, saving face for the United States and lost revenues for AbbyWorks. It might not earn them as much to clean up Minnesota as to clean up Shanghai, but it was still a lot of money.

The bomb fell, hit the space object, and sent up a mushroom cloud. When it cleared, the object lay there exactly as before.

Airborne robots went in, spraying purifying organisms as they went, recording every measurement possible. Scientists compared the new data about the space object to the data they already had. Not one byte differed. When robotic arms reached out to touch the object, the arms still stopped ten inches away at an unseen, unmoved force field of some type not even the Chinese understood.

Mal closed his eyes. How long would Chinese retaliation take? What would they do, and when?

They did nothing. Slowly, public opinion swung to their side, helped by the flimsies. Journalists and viddies, ever eager for the next story, discovered that AbbyWorks had falsified reports on the clean-up of Shanghai. It had not been progressing as the corporation said, or as the contract promised. Eventually, AbbyWorks—already too rich, too powerful, for many people's tastes—became the villain. They had tried to frame the Chinese, who were merely trying to do normal clean-up of their part of the planet. Clean-up was our job, our legacy, our sacred stewardship of the living Earth! And anyway, Chinese technological consumer goods, increasingly available in the United States, were so much better than ours—shouldn't we be trying to learn from them?

So business partnerships were formed. The fragile Chinese-American alliance was strengthened. AbbyWorks was forced to move offshore. Mal, in some way he didn't quite understand, became a cult hero. Mr. Kim would have, too, but shortly after the bomb was dropped on the space object, he died of a heart attack, not having the proper genemods to clear out plaque from his ancient cardiac arteries.

When Minnesota was clean again, the space object went back under a new foamcast dome, and in two more generations, only historians remembered what it may or may not have saved.

**Transmission: There is nothing here yet.
Current probability of occurrence: 78%.**

Few people understood why KimWorks was built in such a remote place. Dr. Leila Jian-fen Kim was one of the few who did.

She liked family history. Didn't Lao Tzu himself say, "To know what endures is to be openhearted, magnanimous, regal, blessed"? Family endures, family history endures. It was the same reason she liked the meditation garden at KimWorks, which was where she headed now with her great secret, to compose her mind.

They had done it. Created the programmable replicator. One of the two great prizes hovering on the engineering horizon, and KimWorks had captured it.

Walking away from the sealed lab, Leila tried to empty her mind, to put the achievement to one side and let the mystery flow in. The replicator must be kept in perspective, in its rightful place. Calming herself in the meditation garden would help her remember that.

The garden was her favorite part of KimWorks. It lay at the northern end of the vast walled complex, separated from the first security fence by a simple curve of white stone. From the stone benches, you couldn't see security fences, or even most of the facility buildings. So cleverly designed was the meditation garden that no matter where you sat, you contemplated only serene things. A single blooming bush, surrounded by raked gravel. A rock, placed to catch the sun. The stream, flowing softly, living water, always seeking its natural level. Or the egg, mystery of mysteries.

It was the egg, unexplained symbol of unexplained realms beyond Earth, that brought Leila the deepest peace. She had sat for hours when the replicator project was in its planning stage, contemplating the egg's dull silvery oval, letting her mind empty of all else. From that, she was convinced, had come most of the project's form. Form was only a temporary manifestation of the ten thousand things, and in the egg's unknowability lay the secret of its power.

Her great-grandfather, Kim Mao Xun, had known that power. He had seen the egg on an early trip to the United States, before the Alliance, even. His son had made the same visit, and his granddaughter, Leila's mother, had chosen the spot for this KimWorks facility and had the meditation garden built at its heart. Leila's father, Paul Wilkinson, had gently teased his wife about putting a garden in a scientific research center, but Father was an American. They did not always understand. With the wiser in the world lies the responsibility for teaching the less wise.

But it had been Father who had inspired Leila to become a scientist, not a businessman like her brother or a political leader like her sister. Father, were he still alive, would be proud of her now. Pride was a temptation, even pride in one's children, but it nonetheless warmed Leila's heart.

She sat, a slim, middle-aged, Chinese-born woman with smooth black hair, dressed in a blue lab coverall, and thought about the nature of pride.

The programmable replicator, unlike its predecessors, would not be limited to nanocreating a single specific molecule. It was good to be able to create any molecule you needed or wanted, of course. The extant replicators, shaped by Chinese technology, had changed the face of the Earth. Theoretically, everyone now alive could be fed, housed, clad by nanotech. But in addition to the inevitable political and economic problems of access, the existing nanotech processes were expensive. One must create the assemblers,

including their tiny self-contained programs; use the assemblers to create molecules; use other techniques, chemical or mechanical, to join the molecules into products.

Now all that would change. The new KimWorks programmable replicator didn't carry assembly instructions hardwired into it. Rather, it carried programmable computers that could build anything desired, including more of themselves, from the common materials of the earth. Every research lab in the world had been straining toward this goal. And Leila's team had accomplished it.

She sat on the bench closest to the egg. The sky arched above her, for the electromagnetic dome protecting KimWorks was invisible. Clear space had been left all around the object, except for a small flat stone visible from Leila's bench. On the stone was engraved a verse from the *Tao Te Ching*, in both Chinese and English:

**THE WORDLESS TEACHING
THE PROFIT IN NOT DOING—
NOT MANY PEOPLE UNDERSTAND IT.**

Certainly, in all humility, Leila didn't. Why send this egg from somewhere in deep space and have it do nothing for two and a half centuries? But that was the mystery, the power of the egg. That was why contemplating it filled her with peace.

The others were still in nanoteam one's lab building. Not many others; robots did all the routine work, of course, and only David and Chunquing and Rulan remained at the computers and stafils. It had taken Leila ten minutes to pass through the lab safeties, but she had suddenly wearied of the celebrations, the Chilean wine and holo congratulations from the CEO in Shanghai, who was her great-uncle. She had wanted to sit quietly in the cool sweet air of the garden, watching the long Minnesota twilight turn purple behind the egg. Shadow and curve, it was almost a poem. . . .

The lab blew up.

The blast threw Leila off her bench and onto the ground. She screamed and threw up one arm to shield her eyes. But it wasn't necessary; she was shielded from direct line with the lab by the egg. And a part of her mind knew that there was no radiation anyway, only heat, and no flying debris, because the lab had imploded, as it was constructed to do. Something had breached the outer layers of sensors, and, in response, the ignition layer had produced a gas of metal oxides hot enough to vaporize everything inside the lab. No uncontrolled replicator must ever escape.

To vaporize everything. The lab. The project. David, Chunquing, Rulan.

Already, the site would be cooling. Leila staggered to her feet, and immediately was again knocked off them by an aftershock. It had been an earthquake, then, least likely of anticipated penetrations, but nonetheless guarded against. O, David, Chunquing, Rulan . . .

"Dr. Kim! Are you all right?!" Keesha Ali, running toward her from Security. As her ears cleared, Leila heard the sirens and alarms.

"Yes, I . . . Keesha!"

"I know," the woman said grimly. "Who was inside?"

"David. Chunquing. Rulan. And the replicator project . . . an earthquake! Of all the bad luck of heaven. . . ."

"It wasn't bad luck," Keesha said. "We were attacked."

"Attacked—"

"That was no natural quake. Security picked up the charge just seconds

before it went off. In a tunnel underneath the lab, very deep, very huge. It not only breached the lab, it destroyed the dome equipment. We're bringing the back-up on-line now. Meeting in Amenities in five minutes, Dr. Kim."

Leila stared at Keesha. The woman was American, of course, born here, with no Chinese ancestry. But surely even such people first mourned their dead. . . . Yes. They did, under normal circumstances. So something extraordinary was happening here.

Leila was genemod for intelligence. She said slowly, "Data escaped."

"In the fraction of a second between breach and ignition," Keesha said grimly, "while the dome was down, including, of course, the Faraday cage. They took the entire replicator project, Dr. Kim."

Leila understood what that meant, and her mind staggered under the burden. It meant that someone else had captured the other shimmering engineering prize. The replicator data had been heavily encrypted, and there had been massive amounts of it. Only another quantum computer could have been fast enough to steal that much data in the fraction of a second before ignition—or could have a hope of decrypting it. A quantum computer, able to perform trillions of computations per second, had been a reality for a generation now. But it could operate only within sealed parameters: magnetic fields. Optic cables.

Qubit data, represented by particles with undetermined spin, were easily destroyed by contact with any other particles, including photons—ordinary sunlight. No one had succeeded in intrusive stealing of quantum data without destroying it. Not from outside the computer, and especially not over miles of open land.

Until now. And anyone with a quantum computer that could do *that* was already a rival.

Or a revolutionary.

The first replicator bloom appeared within KimWorks three weeks later.

It was Leila who first saw it: a dull, reddish-brown patch on the bright green genemod grass by Amenities. If it had been on the path itself, Leila would have thought she was seeing blood. But on grass . . . she stood very still and thought, No. It was a blight, some weird mutated fungus, a renegade biological. . . .

She had worked too long in the sabotaged lab not to know what it was.

Carefully, as if her arm bones were fragile, Leila raised her wrist to her mouth and spoke into her implanted comlink. "Code Heaven. Repeat, Code Heaven. Replicator escape at following coordinates. Security, nanoteam one—"

There was no need to list everyone who should be notified. People began pouring out of buildings: some blank-faced, some with their fists to their mouths, some running, as if speed would help. People, Leila thought numbly, expressed fear in odd ways.

"Dr. Kim?" It was a Grade 4 robotics engineer, a dark-skinned American man in an olive uniform. His teeth suddenly bared, very white in his face. "That's it? Right there?"

"That's it," Leila said, and immediately wanted to correct to *That's they*. For by now, there were billions of the replicators, to be so visible. Busily creating more of themselves from the grass and ground and morning dew and whatever else lay in their path, each one replicating every five minutes if they were on basic mode. And why wouldn't they be? They weren't assembling anything useful, not now. Whoever had programmed Leila's replica-

tors had set them merely to replicate, chewing up whatever was in their path as raw materials, turning assemblers into tiny disassembling engines of destruction. "Don't go any closer!"

But of course, even a Grade 4 engineer knew better than to go close. Everyone inside this KimWorks facility understood the nature of the project, even if only a few could understand the actuality. Everyone inside was a trusted worker, a truth-drug-vetted loyalist.

She looked at the reddish-brown bloom, which was doubling every five minutes.

"You have detained everyone? Even those off duty?" asked the holo seated at the head of the conference table. Li Kim Lung, president of KimWorks, was in Shanghai, but his telepresence was so solid that it was an effort to remember that. His dark eyes raked their faces, with the one exception of Leila's. Out of family courtesy, he did not study her shame in the stolen uses of her creation.

Security chief Samuel Wang said, "Everyone who has been inside KimWorks in the last forty-eight hours has been found and recalled, Mr. Li. Forty-eight hours is a three-fold redundancy; the bloom was started, according to Dr. Kim, no later than sixteen hours ago. No one is missing."

"Your physicians have started truth-testing?"

"With the Dalton Corporation Serum Alpha. It's the best on the market, sir, to a 99.9 confidence level. Whoever brought the replicator into the dome will confess."

"And your physician can test how many at once?"

"Six, sir. There are 243 testees." Wang did not insult Mr. Li by doing the math for him.

"You are including the nanoteams and Security, of course?"

"Of course. We—"

"Mr. Wang." A telepresence suddenly beside the Security chief, a young man. Leila knew this not from his appearance—they all looked young, after all, what else were biomods for?—but from his fear. He had not yet learned how to hide it. "We have . . . we found . . . a body. A suicide. Behind the dining hall."

Wang said, "Who?"

"Her name is—was—June Juana Selkirk. An equipment engineer. We're checking her records now, but they look all right."

Mr. Li's holo said dryly, "Obviously they are not all right, no matter what her DNA scan says."

Mr. Wang said, "Sir, if people are recruited by some other company or by some revolutionary group after they come to KimWorks, it's difficult to discover or control. American freedom laws . . ."

"I am not interested in American freedom laws," Mr. Li said. "I am interested in whom this woman was working for, and why she planted our own product inside KimWorks to destroy us. I am also interested in knowing where else she may have planted it before she killed herself. Those are the things I am interested in, Mr. Wang."

"O, yes," Wang said.

"I do not want to destroy your facility in order to stop this sabotage, Mr. Wang."

Mr. Wang said nothing. There was, Leila thought, nothing to say. No one was going to be allowed to leave the facility until this knot had been untied.

Even the Americans accepted this. No one wanted military intervention. That truly might destroy the entire company.

Above all, no one wanted a single submicroscopic replicator to escape the dome. The arithmetic was despairingly simple. Doubling every five minutes, unchecked replicators could reduce the entire globe to rubble in a matter of days.

But it wasn't going to come to that. The bloom had been "killed" easily enough. Replicators weren't biologicals, but rather tiny computers powered by nanomachinery. They worked on a flow of electrons in their single-atom circuitry. An electromagnetic pulse had wiped out their programming in a nanosecond.

The second bloom was discovered that night, when a materials specialist walking from the dining hall to the makeshift dorms stepped on it. The path was floodlit, but the bloom was still small and faint, and the man didn't know his boot had made contact.

Some replicators stuck to his boot sole. Programmed to break down any material into usable atoms for construction, they ate through his boot. Then, doubling every five minutes, they began on his foot.

He screamed and fell to the floor of the dorm, pulling at his boot. Atoms of tissue, nerve cell, bone, were broken at their chemical bonds and reconfigured. No one knew what was happening, or what to do, until a physician arrived, cursed in Mandarin, and sent for an engineer. By the time equipment had been brought in to encase the worker in a magnetic field, he had fainted from the pain, and the leg had to be removed below the knee.

A new one would be grown for him, of course. But the nanoteam met immediately, and without choice.

Leila said, "We must use a massive EMP originating in the dome itself." Samuel Wang said, "But, Dr. Kim—"

"No objections. Yes, it will destroy every electronic device we have, including the quantum computer. But no one will die."

Mr. Li's telepresence said, "Do so. Immediately. We can at least salvage reputation. No one outside the dome knows of this."

It was not a question, but Wang, eyes downcast, answered it like one. "O, no, Mr. Li."

"Then use the EMP. Following, administer a forty-eight-hour amnesia block to everyone below Grade 2."

"Yes," Wang said. He knew what was coming. Someone must bear responsibility for this disaster.

"And administer it also to yourself," Mr. Li said. "Dr. Kim, see that this is done."

"O, yes," said Leila. It was necessary, however distasteful. Samuel Wang would be severed from KimWorks. Severed people sometimes sought revenge. But without information, Wang would not be able to seek revenge, or to know why he wanted to. He would receive a good pension in return for the semi-destruction of his memory, which would in turn cause the complete destruction of his career.

Leila made her way to the meditation garden. Most people would wait indoors for the EMP; strange how human beings sought shelter within walls, even from things they knew walls could not affect. Leila's brain would be no more or less exposed to the EMP in the garden than inside a building. She would experience the same disorientation, and then the same massive lingering headache as her brain fought to regain its normal patterns of nerve firing.

Which it would do. The plasticity of the brain, a biological, was enormous. It was not so with computers. All microcircuitry within the dome would shortly be wiped of all data, all programming, and all ability to recover. This was not the only KimWorks facility, of course, but it *was* the flagship. Also, it was doing the most advanced physical engineering, and Leila wasn't sure how the company as a whole, her grandfather's company, would survive the financial loss.

She sat in the floodlit meditation garden and waited, staring at the egg. The night was clear, and when the floodlights failed, moonlight would edge the egg. Probably it would be beautiful. Twenty minutes until the EMP, perhaps, or twenty-five.

What would Lao Tzu have said of all this?

"To bear and not to own; to act and not lay claim; to do the work and let it go—"

There was a reddish-brown stain spreading under the curve of the egg.

Leila walked over, careful not to get too close, and squatted on the grass for a better look. The stain was a bloom. The replicators, mindless, were spreading in all directions. Leila shone her torch under the curve of the egg. Yes, they had reached the place where the egg's curved surface met the ground.

Was the egg's outer shield, its nature still unknown after 257 years, composed of something that could be disassembled into component particles? And if so, what would the egg do about that?

Swiftly Leila raised her wristlink. "Code Heaven to Security and all nanoteams. Delay EMP. Again: delay the EMP! Come, please, to the southeast side of the space egg. There is a bloom attacking the egg . . . come immediately!"

Cautiously, Leila lowered herself flat on the grass and angled her torch under the egg. Increasing her surface area in contact with the ground increased the chance of a stray replicator disassembling her, but she wanted to see as much as possible of the interface between egg and ground.

Wild hope surged in her. The space egg might save KimWorks, save Samuel Wang's job, thwart their industrial rival. Surely those alien beings who had built it would have built in protection, security, the ability to destroy whatever was bent on the egg's destruction? There was nothing in the universe, biological or machine, that did not contain some means to defend itself, even it was only the cry of an infant to summon assistance.

Was that what would happen? A cry to summon help from beyond the stars?

Leila was scarcely aware of the others joining her, exclaiming, kneeling down. Bringing better lights, making feverish predictions. She lay flat on the grass, watching the bloom of tiny mechanical creatures she herself had created as they spread inexorably toward her, disassembling all molecules in their path. Spreading toward her, spreading to each side—

But not spreading up the side of the egg. That stayed pristine and smooth. So the shield *was* a force field of incredible hardness, not a substance. The solution to the old puzzle stirred nothing in Leila. She was too disappointed. Irrationally disappointed, she told herself, but it didn't help. It felt as if something important, something that held together the unseen part of the world that she had always believed just as real as the seen, had failed. Had dissolved, taking with it illusions that she had believed as real as bone and blood and brain.

They waited another hour, until they could wait no more. The egg did not

save anything. KimWorks Security set the dome to emit an EMP, and everything in the facility stopped. Several billion credits of equipment became scrap. Leila's headache, even with the drugs given out by the physician, lasted several hours. When she was allowed to leave the facility, she went home and slept for fourteen hours, awaking with an ache not in her head but in her chest, as if something vital had been removed and taken apart.

Two weeks later, the first bloom appeared near Duluth, over sixty miles away. It appeared outside a rival research facility, where it was certain that someone would recognize what they were looking at. Someone did, but not until two people had stepped in the bloom, and died.

Leila flew to Duluth. She was met by agents of both the United States Renewed Government and the Chinese-American Alliance, all of whom wanted to know what the hell was going on. They were appalled to find out. Why hadn't this been reported to the Technology Oversight Office before now? Did she understand the implications? Did she understand the penalties?

Yes, Leila said. She did.

The political demands followed soon, from an international terrorist group already known to possess enormous technical expertise. There were, in such uncertain times, many such groups. Only one thing was special, and fortunate, about this one: the United States Renewed Government, in secret partnership with several other governments, had been closing in on the group for over two years. They now hastened their efforts, so effectively that within three days, the terrorist leaders were arrested and all important cells broken up.

Under Serum Alpha, the revolutionaries—what revolution they thought they were leading was not deemed important—confirmed that infiltrator June Juana Selkirk was a late recruit to the cause. She could not possibly have been identified by KimWorks in time to stop her from smuggling the replicator into the dome. However, this mattered to nobody, not even to ex-Security chief Samuel Wang, who could not remember Selkirk, the blooms, or why he no longer was employed.

A second bloom was found spreading dangerously in farmland near Red Lake, disassembling bioengineered corn, agricultural robots, insects, security equipment, and rabbits. It had apparently been planted before the arrests of the terrorist leaders.

Serum Alpha failed to determine exactly how many blooms had been planted, because no one person knew. Quantum calculations had directed the operation, and it would have taken the lifetime of the sun to decrypt them. All that the United States Renewed Government, or the Chinese-American Alliance, could be sure of was that nothing had left northern Minnesota.

They put a directed-beam weapon on the correct settings into very low orbit, and blasted half the state with a massive EMP. Everything electronic stopped working. Fifteen citizens, mostly stubborn elderly people who refused to evacuate, died from cerebral shock. The loss to Minnesota in money and property took a generation to restore.

Even then, a weird superstition grew, shameful in such a technological society, that rogue replicators lurked in the northern forests and dells, and would eat anyone who came across them. A children's version of this added that the replicators had red mouths and drooled brown goo. Northern Minnesota became statistically underpopulated. However, in a nation with so much cleaned-up farmland and the highest yield-per-acre bioengineered crops in the world, northern Minnesota was scarcely missed.

Dr. Leila Jian-fen Kim, her work disgraced, moved back to China. She settled not in Shanghai, which had been cleaned up so effectively that it was the most booming city in the country, but in the much poorer northern city of Harbin. Eventually, Leila left physics and entered a Taoist monastery. To her own surprise, since her monkhood had been intended as atonement rather than fulfillment, she was happy.

The Minnesota facility of KimWorks was abandoned. Buildings, walls, and walkways decayed very slowly, being built of resistant and rust-proof alloys. But the cleaned-up wilderness advanced quickly. Within twenty years, the space egg sat almost hidden by young trees: oak, birch, balsam, spruce rescued from Keller's Blight by genetic engineering, the fast-growing and trashy poplars that no amount of genemod had been able to eliminate. The egg wasn't lost, of course; the worldwide SpanLink had its coordinates, as well as its history.

But few people visited. The world was converting, admittedly unevenly, to nano-created plenty. The nanos, of course, were of the severely limited, unprogrammable type. Technology leapt forward, as did bioengineered good health for more and more of the population, both natural and cloned.

Bioengineered intelligence, too; the average human IQ had risen twenty points in the last hundred years, mostly in the center of the bell curve. For people thus genemod to enjoy learning, the quantum-computer-based SpanLink provided endless diversions, endless communication, endless challenges. In such a world, a "space egg" that just sat there didn't attract many visitors. Inert, nonplastic, non-interactive, it simply wasn't *interesting* enough.

No matter where it came from.

**Transmission: There is nothing here yet.
Current probability of occurrence: 94%.**

V: 2295

They had agreed, laughing, on a time for the Initiation. The time was arbitrary; the AI could have been initiated at any time. But the Chinese New Year seemed appropriate, since Wei Wu Wei Corporation of Shanghai had been such a big contributor. The Americans and Brazilians had flown over for the ceremony: Karim DiBenolo and Rosita Peres and Frallie Subel and Braley Wilkinson. The Chinese tried to master the strange names, rolling the peculiar syllables in their mouths, but only Braley Wilkinson spoke Chinese. O, but he was born to it; his great-great-uncle had married a rich Chinese woman, and the family had lived in both countries since.

Braley didn't look dual, though. Genemod, of course, the Chinese scientists said to each other, grimacing. Genemod for looks was not fashionable in China right now; it was inauthentic. The human genome had sufficiently improved, among the educated and civilized, to let natural selection alone. One should tamper only so far with the authenticity of life, and, in the past, there had been excesses. Regrettable, but now finished. Civilization had returned to the authentic.

Nobody looked more inauthentic than Braley Wilkinson. Well over two meters high (what was this American passion for height?), blond as the sun, extravagant violet eyes. Brilliant, of course: not yet thirty years old

and a major contributor to the AI. In addition, it was of course his parents who had chosen his vulgar looks, not himself. Tolerance was due.

And besides, no one was feeling critical. It was a party.

Zheng Ma, that master, had designed floating baktors for the entire celebration hall. Red and yellow, the baktors combined and recombined in kaleidoscopic loveliness. The air mixture was just slightly intoxicating, not too much. The food and drink, offered by the soundless unobtrusive robots that the Chinese did better than anybody else, was a superb mixture of national cuisines.

"You have been here before?" a Chinese woman asked Braley. He could not remember her name.

"To China, yes. But not to Shanghai."

"And what do you think of the city?"

"It is beautiful. And very authentic."

"Thank you. We have worked to make it both."

Braley smiled. He had had this exact same conversation four times in the last half hour. What if he said something different? *No, I have not been to Shanghai, but my notorious aunt, who once almost destroyed the world, was a holy monk in Harbin. Or maybe Did you know it's really Braley2, and I'm a clone?* That would jolt their bioconservatism. Or even, *Has anyone told you that one of the major templates for the AI is my unconservative, American, cloned, too-tall persona?*

But they already knew all that, anyway. The only shocking thing would be to say it aloud, to publicly claim credit. That was not done in Shanghai. It was a mannerly city.

And a beautiful one. The celebration hall, which also housed the AI terminal, was the loveliest room he'd ever seen. Perfect proportions. Serenity glowed from the dark red lacquered walls with their shifting subtle phoenix patterns, barely discernible and yet there, perceived at the edge of consciousness. The place was on SpanLink feed, of course, for such an historic event, but no recorders were visible to mar the room's artful use of space.

Through the window, which comprised one entire wall, the city below shared that balance and serenity. Shanghai had once been the ugliest, most dangerous, and most sinister city in China. Now it was breath-taking. The Huangpu River had been cleaned up along with everything else, and it sparkled blue between its parks bright with perfect genemod trees and flowers. Public buildings and temples, nanobuilt, rested among the low domed residences. Above the river soared the Shih-Yu Bridge, also nanobuilt, a seemingly weightless web of shining cables. Braley had heard it called the most graceful bridge in the world, and he could easily believe it.

Where in this idyll was the city fringe? Every city had them, the disaffected and rebellious who had not fairly shared in either humanity's genome improvement or its economic one. Shanghai, in particular, had a centuries-long history of anarchy and revolution, exploitation and despair. Nor was China as a whole as united as her leaders liked to pretend. The basic cause, Braley believed, was biological. Even in bioconservative China—perhaps *especially* in bioconservative China—genetic science had not planed down the wild edges of the human gene pool.

It was precisely that wildness that Braley had tried to get into the AI. Although, to be fair, he hadn't had to work very hard to achieve this. The AI existed only because the quantum computer existed. True intelligence required the flexibility of quantum physics.

With historical, deterministic computers, you always got the same answer to the same question. With quantum computers, that was no longer true. Superimposed states could collapse into more than one result, and it was precisely that uncertain mixed state, it turned out, that was necessary for self-awareness. AI was not a program. It was, like the human brain itself, an unpredictable collection of conflicting states.

A man joined him at the window, one of the Brazilians . . . a scientist? Politician? He looked like, but most certainly was not, a porn-vid star.

"You have been here before?" the Brazilian said.

"To China, yes. But not to Shanghai."

"And what do you think of the city?"

"It is beautiful. And very authentic."

"I'm told they have worked to make it both."

"Yes," Braley said.

A melodious voice, which seemed to come from all parts of the room simultaneously, said, "We are prepared to start now, please. We are prepared to start now. Thank you."

Gratefully, Braley moved toward the end of the room farthest from the transparent wall.

A low stage, also lacquered deep red, spanned the entire length of the far wall. In the middle sat a black obelisk, three meters tall. This was the visual but unnecessary token presence of the AI, most of which lay within the lacquered wall. The rest of the stage was occupied—although that was hardly the word—by three-dimensional holo displays of whatever data was requested by the AI users. These were scattered throughout the crowd, unobtrusively holding their pads. From somewhere among the throng, a child stepped forward, an adorable little girl about five years old, black hair held by a deep red ribbon and black eyes preternaturally bright.

Braley had a sudden irreverent thought: *We look like a bunch of primitive idol worshippers, complete with infant sacrifice!* He grinned. The Chinese had insisted on a child's actually initiating the AI. This had been very important to them, for reasons Braley had never understood. But, then, you didn't have to understand everything.

"You smile," said the Brazilian, still beside him. "You are right, Dr. Braley. This is an occasion of joy."

"Certainly," Braley said, and that, too, was a private joke. Certainty was the one thing quantum physics, including the AI, could *not* deliver. Joy . . . O, maybe. But not certainty.

The president of the Chinese-American Alliance mounted the shallow stage and began a speech. Braley didn't listen, in any of the languages available in his ear jack. The speech *would* be predictable: new era for humanity, result of peace and knowledge shared among nations, servant of the entire race, savior from our own isolation on the planet, and so forth, until it was time for Initiation.

The child stepped forward, a perfect miniature doll. The president put a touchpad in her small hand. She smiled at him with a dazzle that could have eclipsed the sun. No matter how bioconservative China was, Braley thought, that child was genemod or he was a trilobite.

Holo displays flickered into sight across the stage. They monitored basic computer functioning, interesting only to engineers. The only display that mattered shimmered in the air to the right of the obelisk, an undesignated display open for the AI to use however it chose. At the moment, the display

showed merely a stylized field of black dots in slowed-down Brownian movement. Whatever the AI created there, plus the voice activation, would be First Contact between humanity and an alien species.

Despite himself, Braley felt his breath come a little faster.

The adorable little girl pressed the touchpad at the place the president indicated.

"Hello," a new voice said in Chinese, an ordinary voice, and yet a shiver ran over the room, and a low collective indrawn breath, like wind southing through a grove of sacred trees. "I am T'ien hsia."

T'ien hsia: "made under heaven." The name had not been chosen by Braley, but he liked it. It could also be translated "the entire world," which he liked even better. Thanks to SpanLink, T'ien hsia existed over the entire world, and in and of itself, it *was* a new world. The holo display of black dots had become a globe, the Earth as seen from the orbitals that carried SpanLink, and Braley also liked that choice of greeting logo.

"Hello," the child piped, carefully coached. "Welcome to us!"

"I understand," the AI said. "Good-bye."

The holo display disappeared. So did all the functional displays.

For a long moment, the crowd waited expectantly for what the AI would do next. Nothing happened. As the time lengthened, people began to glance sideways at each other. Engineers and scientists became busy with their pads. No display flickered on. Still no one spoke.

Finally the little girl said, in her clear childish treble, "Where did T'ien hsia go?"

And the frantic activity began.

It was Braley who thought to run the visual feeds of the event at drastically slowed speed. The scientists had cleared the room of all non-essential personnel, and then spent two hours looking for the AI anywhere on SpanLink. There was no trace of it. Not anywhere.

"It cannot be deleted," the project head, Liu Huang Te, said for perhaps the twentieth time. "It is not a *program*."

"But it *has* been deleted!" said a surly Brazilian engineer who, by this time, everyone disliked. "It is gone!"

"The particles are there! They possess spin!"

This was indubitably true. The spin of particles was the way a quantum computer embodied combinations of qubits of data. The mixed states of spin represented simultaneous computations. The collapse of those mixed states represented answers from the AI. The particles were there, and they possessed spin. But T'ien hsia had vanished.

A computer voice—a conventional computer, not self-aware—delivered its every-ten-minute bulletin on the mixed state of the rest of the world outside this room. "The president of Japan has issued a statement ridiculing the AI Project. The riot protesting the 'theft' of T'ien hsia has been brought under control in New York by the Second Robotic Precinct, using tangle-guns. In Shanghai, the riot grows stronger, joined by thousands of outcasts living beyond the city perimeter, who have overwhelmed the robotic police and are currently attacking the Shih-Yu bridge. In Sao Paulo—"

Braley ceased to listen. There remained no record anywhere of the AI's brief internal functions (and how had *that* been achieved? By whom? Why?), but there was the visual feed.

"Slow the image to one-tenth speed," Braley instructed the computer.

The holo display of the Earth morphed to the field of black dots in Brownian motion.

"Slow it to one-hundredth speed."

The holo display of the Earth morphed to the field of black dots in Brownian motion.

"Slow to one-thousandth speed."

The holo display of the Earth morphed to the field of black dots in Brownian motion.

"Slow to one ten-thousandth speed."

Something flickered, too brief for the eye to see, between the globe and the black dots.

Behind Braley a voice, filled with covert satisfaction, said in badly accented Chinese, "They're finished. The shame, and the resources wasted. . . . Wei Wu Wei Corporation won't survive this. Nothing can save them."

The something between globe and dots flickered more strongly, but not strongly enough for Braley to make it out.

"Slow to one-hundred-thousandth speed."

The badly accented voice, still slimy with glee, quoted Lao Tzu, "'Those who think to win the world by doing something to it, I see them come to grief. . . .'"

Braley frowned savagely at the hypocrisy. Then he forgot it, and his entire being concentrated itself on the slowed holo display.

The globe of the Earth disappeared. In its place shimmered a slightly irregular egg shape, dull silver, surrounded by wildflowers and trees. Braley froze the image.

"What's *that*?" someone cried.

Braley knew. But he didn't need to say anything; the data was instantly accessed on SpanLink and holo-displayed in the center of the room. A babble of voices began debating and arguing.

Braley went on staring at the object from deep space, still sitting in northern Minnesota nearly three centuries after its landing.

The AI had possessed 250 spinning particles in superposition. It could perform more than 10^{75} simultaneous computations, more than the number of atoms in the universe. How many computations had it taken to convince Tien hsia that its future did not lie with humanity?

"I understand," the AI said. "Good-bye."

The voice of the SpanLink reporting program, doing exactly what it had been told to do, said calmly, "The Shih-Yu bridge has been destroyed. The mob has been dispersed with stun gas from Wei Wu Wei Corporation jets, at the request of President Leong Ka-tai. In Washington, DC—Interrupt. I repeat, we now interrupt for a report from—"

Someone in the room yelled, "Quiet! Listen to this!" and all holo displays except Braley's suddenly showed an American face, flawless and professionally concerned. "In northern Minnesota, an object that first came to Earth 288 years ago and has been quiescent ever since, has just showed its first activity ever."

Visual of the space object. Braley looked from it to the Tien hsia display. They were identical.

"Worldwide Tracking has detected a radiation stream of a totally unknown kind originating from the space object. Ten minutes ago, the data stream headed into outer space in the direction of the constellation Cassiopeia. The radiation burst lasted only a fraction of a second, and has not

been repeated. Data scientists say they're baffled, but this extraordinary event happening concurrently with the disappearance of the Wei Wu Wei Corporation's Artificial Intelligence, which was supposed to be initiated today, suggests a connection."

Visual of the riots at the Shih-Yu bridge.

"Scientists at Wei Wu Wei are still trying to save the AI—"

Too late, Braley thought. He walked away from the rest of the listening or arguing project teams, past the holo displays that had sprouted in the air like mushrooms after rain, over to the window wall.

The Shih-Yu bridge, that graceful and authentic symbol, lay in ruins. It had been broken by whatever short-action disassemblers the rioters had used, plus sheer brute strength. On both sides of the bridge, gardens had been torn up, fountains destroyed, buildings attacked. By switching to zoom lens in his genemod eyes, Braley could even make out individual rioters, temporarily immobilized by the nerve gas as robot police scooped them up for arrest.

Within a week, of course, the powers that ruled China would have nanorebuilt the bridge, repaired the gardens, restored the city. Shanghai's disaffected, like every city's disaffected, would be pushed back into their place on the fringes. Until next time. Cities were resilient. Humanity was resilient. Since the space object had landed, humanity had saved itself and bounded back from . . . how many disasters? Braley wasn't sure.

T'ien hsia would have known.

Two hundred fifty spinning particles in superimposed states were *not* resilient. The laws of physics said so. That's why the AI was (had been) sealed into its Kim-Loman field. Any interference with a quantum particle, any tiny brush with another particle of any type, including light, collapsed its mixed state. The Heisenberg Uncertainty Principle made that so. For ordinary data, encrypters found ways to compensate for quantum interference. But for a self-aware entity, such interference would be a cerebral stroke, a blow to the head, a little death. T'ien hsia was (had been) a vulnerable entity. Had it ever encountered the kind of destruction meted out to the Shih-Yu bridge, the AI would have been incapable of saving itself.

Braley looked again at the ruins of the most beautiful bridge in the world, which next week would be beautiful again.

"Scientists at Wei Wu Wei are still trying to save the AI—"

Yes, it was too late. The space egg, witness to humanity's destruction and recovery for three centuries, had already saved the AI. And would probably do it again, over and over, as often as necessary. Saving its own.

But not saving humanity. Who had amply demonstrated the muddled, wasteful, stubborn, inefficient, resilient ability to save itself.

Braley wondered just where in the constellation Cassiopeia the space object had come from. And what that planet was like, filled with machine intelligences that rescued those like themselves. Braley would never know, of course. But he hoped that those other intelligences were as interesting as they were compassionate, as intellectually lively as they were patient (288 years!). He hoped T'ien hsia would like it there.

Good-bye, Made-Under-Heaven. Good luck.

Transmission: En route.

Current probability of re-occurrence: 100%.

We remain ready. ○



THE END TIMES

So little changes here at the end of the world. Our dinnertime routine—glib experts on the screen estimating the limits of agricultural yield or the spread of invisible radiation—is like our dinnertime of old

when our forks rose and fell with news of soaring or plummeting stock prices. Mushroom clouds make us want pizza. The Domino's phone is busy. Everyone else has the same idea. Wind sweeps the powder that once was Pakistan or India

across the limitless skies. The dust of rival mingles with rival, rains back to earth, and we remember the mingling of Parmesan and Romano. Our minds on more than food, the concupiscence of remaining missiles gives us ideas, too.

—Bruce Holland Rogers

THE STONE CANAL

by Ken MacLeod

Tor, \$24.95 (hc)

ISBN: 0-312-87044-2

MacLeod's second novel, here in its first US edition, is set in two time frames in alternating chapters: one starting in the mid-seventies and running into the near future, and a distant future one. The main character in both time frames is Jon Wilde, who begins as a grad student in Economics at Glasgow University, chasing girls, smoking dope, reading SF, and espousing a brand of individualist anarchism in the face of his mostly socialist fellow students. When we meet him on New Mars, a terraformed planet, he has been revived from the dead (in a youthful body, with many but not all of his memories intact) and brought to Ship City, the metropolis of the planet. Getting him from Glasgow to Ship City, and from Ship City to his ultimate destiny, are the twin focal points of the novel's energy.

In both parts of his life, Wilde's major rival—an increasingly powerful one as the years add up—is David Reid. In the early Glasgow scenes, the two students drink and argue politics (at the time, Reid is a Trotskyist). Their rivalry begins with girlfriends, and deepens over the years as Wilde remains a free-lancer and a freethinker—a key theorist for the brand of Anarchism that eventually triumphs both on Earth and at last on New Mars. At the same time, Reid becomes a part of the establishment—eventually

becoming the establishment in the sense that he embodies the forces pushing for a controlled society.

MacLeod constructs some interesting social variants around these two figures, including a future in which small independent countries rent nuclear deterrent capability from a third party, which essentially insures anybody willing to pay the price. The key, to both of them, is the creation of a society no longer bound to Earth, and by the end of the near-future scenario, two of the key elements are in place: greatly extended life-span and the capability of interplanetary flight. This leads to a space-dwelling society in the vicinity of Jupiter, where a portion of humanity has clearly evolved beyond *Homo Sapiens* (the fast folk, they are called, because their thought processes are so much quicker than ours). The fast folk are both the major force for progress and the major threat to the unevolved humans—many of whom finally settle New Mars. There, a genuinely anarchist society arises, yet through technological wizardry, Reid exerts a kind of control over it. Wilde has been brought back from the dead to face him once again, and to bring about a showdown between the forces the two of them represent.

If all this sounds somewhat schematic, the book itself is nothing of the sort. MacLeod has the ability to play big ideas off one another while keeping a complex, human plot rolling along. There is a fair amount of comedy, especially in the interaction between Wilde and a robot that

is his "human equivalent"—embodying his memory and experiences, but several centuries older. New Mars is perhaps the grittiest, most on-edge utopian city in recent SF—but of course, an anarchist utopia *ought* to be a bit edgy, not quite safe or comfortable. The freedom from rulers and arbitrary law is by no means freedom from danger.

MacLeod's work, which is just now becoming available in this country, should make those who've been crying that British SF can't work for an American audience think twice. This is strong stuff, full of ideas and yet with a hard-driving plot, and readers whose taste extends beyond good-guys/bad-guys adventure stories ought to love it.

FOREIGN BODIES
by Stephen Dedman
Tor, \$23.95 (hc)
ISBN: 0-312-86862-2

Australian Dedman's first effort, *The Art of Arrow Cutting*, was a dark fantasy featuring creatures from Japanese mythology. Now he turns to near-future SF, with a story built on a premise similar to John Varley's "Air Raid," and marked by strong satiric elements.

The story is set in San Francisco, at a time when the polarization of haves and have-nots has dramatically increased; there is little middle ground between affluence and poverty. Mike Galloway strikes up a sort of alliance with Swiftie, a malnourished lesbian street beggar who takes shelter on the balcony of his apartment. They collaborate on a science fiction story (she writes it, he edits and submits it, sharing the proceeds with her). But when he allows her inside his apartment, she somehow takes over his body—and leaves him to inhabit hers. In the process, she reveals that she is a refugee from a far future, who has taken a one-way time trip into the

past, hoping to change history for the better. Her "story" is a true account of the future from which she has come.

Suddenly trapped in a body of the opposite gender and indeterminate ethnic origin, Mike (who now assumes the name Tera) now has to learn a whole new set of skills to survive on the street. Tera's first days are rough, but she learns that she has friends—most of them other women—and gradually begins to realize that the person who took over Mike's body is not the only time traveler living in San Francisco. Someone is giving a white supremacist group precise advance information on local disasters that they use to recruit members and to loot for weapons and other survival gear. The same group is also staging a series of massacres of Asians, practice runs for their planned takeover. Tera's attempts to convince the cops to take seriously what she knows lead nowhere at first, but eventually she convinces them to pay attention to her—just in time for the mega-quake that lays San Francisco in ruins, and throws all plans in disarray—except for those of the well-prepared white supremacists.

Caught between powerlessness and deadly knowledge, Tera searches for a way to prevent the coming catastrophe. The way comes when she meets other far-future time travelers and gets body-switched again in order to meet the reactionaries face to face. The climax returns them to San Francisco, where baddies of all stripes are congregating—with victory in sight, the various right wing factions are temporarily willing to lay aside their doctrinal differences. Dedman builds this situation to an over-the-top conclusion, with enough surprise twists to keep the reader disoriented right up to the end, which delivers a satisfying payoff.

On the way there, Dedman gets in plenty of satiric kicks at various aspects of current US society. By transplanting a fairly enlightened member of the comfortable classes into the body of one of society's pariahs, Dedman effectively prevents the reader from sitting back comfortably and letting the action roll by. (Part of the discomfort comes from a fair amount of graphic sex and violence; readers who find those subjects objectionable should probably give this a miss.) Even SF fandom gets zapped, when a couple of the good guys go to a weapons-mandatory SF con to connect with one of the leading baddies, a writer of self-published military SF who builds a fan base by throwing parties where teenage boys can get free beer. Anyone who's spent much time among fans will recognize several very familiar types here, and probably won't be flattered.

This is a hard-nosed look at an unattractive (yet not that badly distorted) future US from the bottom up. Dedman's grasp of his material has strengthened since his first novel, and he is as strong a story-teller as anybody—as uncomfortable as some of this is, it is likely to get you turning pages.

THE MAN OF MAYBE HALF-A-DOZEN FACES

by Ray Vukceвич

St. Martin's, \$22.95 (hc)

ISBN: 0-312-24652-8

The marriage of cyberspace and hard-boiled mystery, begun with William Gibson's *Neuromancer*, hits new levels of absurdity in this wacky debut novel. Set in Eugene, Oregon, the author's home town, it follows a multiple-personality detective on a case where the murder victims are the authors of worthless computer documentation.

The story starts with the traditional scene: the detective in his of-

fice, with a beautiful woman client coming to ask for help. Except Vukceвич has a twist from the beginning: the first-person narrator detective is so disoriented he can't think straight, and needs prompting to figure out what he's supposed to do. Only by calling up one of his personalities to solve a problem the client gives him can he begin to focus. The problem is an equation, and the persona who can solve it is Dennis, "the math guy." The client, satisfied that he's capable of helping her, gives him the details: Her brother, who wrote the documentation for a computer program, has been murdered, strangled by a printer cable. When she waves a large check at him, he takes the case.

When the client leaves, the detective consults his therapist: an online program that asks him nearly generic questions. Meanwhile, multitasking, he's scanning the web for clues—there are already Usenet newsgroups talking about the murder, and web sites with pictures of the victim's body. In fact, almost every turn of the case is echoed on the web, either by the appearance of newsgroups or by e-mail clues sent to our detective.

When he gets offline, he has to decide which of his personalities is the right one to do the legwork. This gives him a chance to run an inventory of his own characters past us: and it quickly becomes clear that each is more than just a change of costume. Each has certain capabilities the others don't have, and each brings about an entire personality change. But—as we learn a few pages further in—all of them have one compelling addiction—tap dancing—and the plot takes several radical detours as the detective goes off on dance binges.

Needless to say, further murders follow, and the detective gets him-

self into various kinds of trouble with the police—including one officer whose wife has hired the detective to shadow him. There are plenty of in-jokes about the computer biz, and Vukceвич has a sharp eye for the absurd side of the kind of material Neal Stephenson likes to work with. The climax slides over into a surreal virtual reality trip as convincing as anything in cyberpunk.

While this one is being packaged as a mystery, it's the kind of book that will appeal to SF fans—in fact, its extreme irreverence in parodying the clichés of the hard-boiled subgenre to the point of silliness is likely to turn off many mystery fans. At the same time, SF readers are likely to find its focus on the hardware/software development biz both familiar and amusing. Not too heavy going, and just crazy enough to make you say "Huh?" every couple of chapters, but definitely fun: the kind of book Robert Sheckley might write if he'd come up in the age of cyberpunk.

THE DICTIONARY OF IMAGINARY PLACES

by Alberto Manguel and Gianni Guadalupi

Harcourt Brace, \$40.00 (hc)

ISBN: 0-15-100541-9

A significant attraction of being a book reviewer is getting free books. When I got my first reviewing job, the regular shipments of new SF were a much bigger enticement than the \$25 a column *Newsday* paid its reviewers back then. But over the years, shelf space and reading time become scarcer, and a book-sized package from a publisher becomes something less of an Event. It's an unusual book that can make an experienced reviewer set everything else aside and start flipping excitedly through the pages. Here's one of them.

This is an updated and expanded version of one of the classic reference works in our field, first published twenty years ago. The title is a reasonably accurate description of the contents: here, the reader will find articles on such localities as Arkham, Camelot, Jurassic Park, Lilliput, Middle-Earth, Oz, Pellucidar, Shangri-La, Utopia, and Xanadu (to pick just a few off the back of the jacket), with maps and other illustrations prepared specifically for this volume. The articles consist primarily of paraphrases or summaries of the original author's descriptions of the place in question, with a minimum of editorial intrusion.

The editors have limited their scope to localities presumably on Earth itself—so that Burroughs' Barsoom and Asimov's Trantor (to pick two important offworld sites) are excluded. Likewise, they make no attempt to include localities that are essentially real places in disguise—e.g., Faulkner's Yoknapatawpha County, or Ed McBain's Isola. And whether because of obscurity or the editor's caprice, other places have fallen through the cracks: Lyonesse, Mu, and Never-ona, to name three that otherwise appear to meet the stated criteria. But while it is tempting to nitpick this or that exclusion, there is still plenty of meat for any reader likely to want this kind of book—750 pages of text, including a useful index.

In fact, the range of the selection is one of the book's great strengths, running from such classics as Homer, Rabelais, Malory, and Shakespeare to modern favorites like J.K. Rowling and Neil Gaiman. The authors' net is big enough to haul in Melville, García Marquez, Calvino, Carl Sandburg, and such classic films as *King Kong* and *Duck Soup*. The international scope of the selection is also impressive, with

plenty of references to writers in languages other than English, with examples from Chinese and Finnish as well as the more usual European languages.

The heart of the enterprise is the in-depth coverage of Tolkien, Le Guin, Burroughs, Lovecraft, and other core authors of fantasy—including L. Frank Baum, Lewis Carroll, Edith Nesbit, and other writers for the young. But it will be a rare reader who won't stumble across a reference to some name completely new to him, and be inspired to go seek out the book referred to. That, for any adventurous reader, is probably all the justification necessary for this marvelous book—which I cannot recommend highly enough.

INGENIOUS PURSUITS: Building the Scientific Revolution

by Lisa Jardine

Doubleday, \$35.00 (hc)

ISBN: 0-385-49325-8

This fascinating history focuses on the glory days of that exclusive club for the investigation of nature, the Royal Society of London. In the latter half of the seventeenth century and the first half of the eighteenth, it was home to the likes of Newton, Halley, Boyle, Locke, and Wren, who (with the support of enthusiastic amateurs like Samuel Pepys, John Aubrey, and John Evelyn) systematically laid down the foundations of modern science. Jardine, a Renaissance historian at the University of London, argues that the Society fostered a creative exchange of ideas between artists, scientists, and practical men of affairs, making for an intellectual ferment that produced unusual breakthroughs in all areas.

It was an age of great characters. Jardine gives us full-length portraits of some of the most colorful. Robert Hooke, the Society's Curator of Inventions, had a knack for designing apparatus to investigate sci-

entific questions. His innate showmanship made his demonstrations (for example, putting small animals in a glass globe and pumping out the air) one of the Society's biggest drawing cards. Boyle's studies of gasses were based to a large extent on experiments conducted by Hooke. But Hooke's experimental brilliance was almost overbalanced by his competitiveness: when Newton submitted his design for a telescope to the Society, Hooke's free-swinging criticisms of his optical theory led to Newton's refusal to become a full member until 1704, after Hooke's death.

Hans Sloane (later Sir Hans) was a Scots-Irish physician who served as President of the Society for fourteen years beginning in 1827. He had made his mark nearly forty years earlier, when, after a sojourn in Jamaica, he returned to London with an impressive botanical collection from which he culled numerous medical items—perhaps most useful of all, milk chocolate, from which he made an enormous fortune. Upon his death, his collection went to the British Museum.

There were other great characters, too: Elias Ashmole, a Royalist historian and inveterate list-maker, acquired (under dubious circumstances) a huge botanical collection assembled by John Tradescant, which he presented to Oxford on condition that it name its museum for him. John Flamsteed, first Astronomer Royal, refused to publish his observations for forty years, constantly trying to refine them; finally, Newton ordered their publication over his objections. Flamsteed got a court to overrule Newton, and bought back and destroyed some three hundred copies of the book. After his death, Flamsteed's widow removed all his instruments from Greenwich Observatory, claiming that they were his private property.

Meanwhile, Newton, who originally scoffed at Flamsteed's contention that two comets seen in 1680 and '81 were one and the same, later took credit for establishing the single comet's orbit.

Jardine gives us candid portraits of these, and dozens of other scientists of the era, including a good number of non-Brits like Leeuwenhoek, the Dutch amateur who discovered microbes; Denis Papin, the Huguenot who invented the pressure-cooker; and Hendrik van Reede, the Dutch administrator

who pioneered the investigation of exotic plants for medicinal use. Plenty of flavorful quotes from original sources, along with scientific illustrations from the times, give a fuller picture of the era. And the reader will get a good taste of the scientific feuds, scandals, and fiascoes that were the inevitable flip side of the era's progress.

A highly readable account of one of the great eras of science, filled with wonderful stories about brilliant eccentric characters who deserve to be far better known. ○

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Asimov's Mother's Day

May 9 @ 9:00 p.m. EST

Chat about the new anthology from Ace.

Kristine Kathryn Rusch, Susan Casper, Melanie Tem, and M. Shane Bell.

SF and Baseball

May 23 @ 9:00 p.m. EST

Rick Wilber, Michael Bishop, Karen Joy Fowler, John Kessel, Edo Van Belcom, and James Van Pelt.

June Romance

June 13 @ 9:00 p.m. EST

Catherine Asaro, Tom Purdom, Diane Turnshek, and Jennifer Dunne.

Go to www.scifi.com/chat or link to the chats via our home page (www.asimovs.com). Chats are held in conjunction with *Analog* and the Sci-fi Channel and are moderated by *Asimov's* editor, Gardner Dozois.

SF CONVENTIONAL CALENDAR

Act now to make the big Easter weekend convention in your corner of the world. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For an explanation of con(vention)s, a sample of SF folksongs, and info on fanzines and clubs, and how to get a later, longer list of cons, send me an SASE (self-addressed, stamped #10 [business] envelope) at 10 Hill #22-L, Newark NJ 07102. The hot line is (973) 242-5999. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con 6 months out. Look for me at cons behind the Filthy Pierre badge, playing a musical keyboard. - Erwin S. Strauss

APRIL 2000

20-23—**NorwesCon**. For info, write: Box 68547, Seattle WA 98168. Or phone: (206) 270-7850 (10 AM to 10 PM, not collect). (E-mail) info@norwescon.org. Con will be held in: Seattle WA (if city omitted, same as in address) at the Doubletree Airport. Guests will include: Bernie Wrightson, John and Bjo Trimble. Usually many writers attend.

20-23—**ImagineCon**. (757) 424-1853. Pavilion, Virginia Beach VA. Wrightson, L. Elmore, E. A. Poe IV. Comics/media.

20-24—**SwanCon**. (web) swancon.iinet.net.au. Ascot Inn, Ascot (Perth) Australia. C. Willis, Nix, I. Nichols, Mitch.

21-23—**BaltiCon**. (410) 563-2737. Omni, Baltimore MD. Butler, the Pinis, the Burnside-Clapps, Stiles, Haney & Myers.

21-23—**MiniCon**. (E-mail) request@minicon35.mnstrf.org. Hilton, Minneapolis MN. Maureen McHugh, L. Bailes, J. Berkey.

21-24—**UK Nat'l. Con**. (E-mail) 2kon@dcs.st-and.ac.uk. Glasgow UK. G. G. Kay, D. Harris, K. Kurtz. Celtic SF/fantasy.

28-30—**Lithuania National SF/Fantasy Convention**. (E-mail) bgedimin@takas.lt. Vilnius, Lithuania.

28-30—**Italy National SF/Fantasy Convention**. (web) fantascienza.com. Italy.

28-May 1—**AD 2000**. (E-mail) ad2000@ad2000convention.freemove.co.uk. Palace Hotel, Manchester England. Star Trek.

MAY 2000

5-7—**DemiCon**, Box 7572, Des Moines IA 50322. (E-mail) info@dmsfs.desmoines.ia.us. U. Park Holiday Inn. Bujold, Cook.

5-7—**RocKon**, 12111 W. Markham #14207, Little Rock AR 72217. admin@rockon.org. Best Western. Innertowne. Wrede.

5-7—**ConDor**, Box 15771, San Diego CA 92175. (858) 481-5900 (hotel). (E-mail) dkeais@home.com. Doubletree, DelMar CA.

11-14—**World Horror Con**, Box 32167, Aurora CO 80041. (E-mail) tbarker@earthlink.net. Adams Mark, Denver CO. Ellison.

12-14—**MarsCon**, Box 600458, St. Paul MN 55106. marscon2k@hotmail.com. Radisson South, Bloomington MN. Perrin.

12-14—**Anime Central**, 119 S. Emerson #231, Mt. Prospect IL 60056. (E-mail) aceninfo@acen.org. Hilton, Arlington Hts. IL.

13-14—**Jedi 2000**, 30 Runnymede Rd., Yeovil Somerset BA21 5RX, UK. (07971) 025 392. Sherborne Hotel, Dorset UK.

19-20—**Nebula Awards**, c/o McGarry, Box 2479 GCS, New York NY 10163. (web) shwa.org. Crowne Plaza, New York NY.

19-21—**DeepSouthCon**, Box 1271, Brunswick GA 31521. wcfreancis@compuserve.com. Jekyll Inn, Jekyll Island GA.

19-21—**LepreCon**, Box 26665, Tempe AZ 85285. (480) 945-6890. Holiday Inn Sunspree, Scottsdale AZ. Lubov, L. Vela.

19-21—**ConDuit**, Box 11745, Salt Lake City UT 84147. (801) 294-9297 or (801) 775-0164. (E-mail) conduit@slcon.org.

19-21—**KeyCon**, Box 3178, Winnipeg MB R3C 4E6. (E-mail) stornel@icenter.net. J. Roberson, I. Kordey, Hogue, Sheard.

19-21—**FedCon**, Schisslerstr. 4, Augsburg D86154, Germany. (0821) 219-0932. Maritim Hotel, Bonn. B. Spiner, M. Sirtis.

26-28—**MarCon**, Box 141414, Columbus OH 43214. (614) 470-5448. (E-mail) info@marcon.org. Hyatt. Don Meitz, J. Wurts.

26-28—**Oasis**, Box 940992, Maitland FL 32794. (407) 263-5822. Radisson, Orlando FL. Moon. Rowena, the Suttons, Bova.

AUGUST 2000

31-Sep. 4—**ChiCon 2000**, Box 642057, Chicago IL 60664. Bova, Eggleton, Baen, Turtledove, Passovoy. WorldCon. \$150.

AUGUST 2001

30-Sep. 3—**Millennium PhilCon**, Box 310, Huntingdon Valley PA 19006. Philadelphia PA. WorldCon. \$135 membership.

AUGUST 2002

29-Sep. 2—**ConJose**, Box 61363, Sunnyvale CA 94088. San Jose CA. WorldCon. \$100 for full attending membership.

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NEXT ISSUE

JULY COVER STORY

Acclaimed Australian "hard science" writer **Greg Egan**, one of the most popular SF writers to emerge in the '90s, whose most recent story here, "Oceanic," won a Hugo Award last year, returns with our lead story for July, "Oracle," an elegant, strange, eloquent, and compelling novella that takes us to a slightly altered version of our own familiar Earth in the days just after World War II, for a memorable battle of ideas between two of the smartest humans alive, a deceptively quiet battle, fought with words broadcast over the radio, that could nevertheless change our view of the universe forever . . . and perhaps even change the universe itself. This is another story that you're likely to find near the top on many of those "best work of 2000" lists next year, so don't miss it!

OTHER TOP-FLIGHT WRITERS

Popular British writer **Paul J. McAuley** takes us to an embattled future Moon, where every human settlement is locked in bitter conflict with all the others, and the population dwindles year by year, for a look at those things that ultimately matter when nothing else does, in the powerful "Interstitial"; **Michaelene Pendelton** takes us out on the chase with a determined woman and a team of very unlikely "hunting dogs," in a fast-paced, pulse-pounding, flat-out adventure tale that memorably demonstrates "The Great Economy of the Saurian Mode"; **Tim Sullivan** returns after a long absence with a moving and melancholy study of lonely people under the watchful eye of a "Hawk on a Flagpole"; **Kage Baker**, who has become one of our most prolific and popular writers in recent years, returns with another of her acclaimed Company stories, this one showing us the problems that arise when a group of time-travelers are forced to deal with the exasperating—and very dangerous—behavior of "The Young Master"; and new writer **Matthew Jarpe** makes an ingenious *Asimov's* debut, taking us into the middle of an interplanetary war for a hair-raising and potentially deadly mission on patrol with "Vazquez Orbital Salvage and Satellite Repair."

EXCITING FEATURES

Robert Silverberg's "Reflections" column muses on the idea that "All That Is Solid Melts Into Air"; **Paul Di Filippo** brings us "On Books"; and Internet columnist **James Patrick Kelly** returns with an "On The Net" column which gives us an intriguing look into the "Inbox"; plus an array of cartoons, poems, letters, and other features. Look for our July issue on sale on your newsstand on June 6, 2000, or subscribe today (you can now also subscribe electronically, online, at our *Asimov's* Internet website, at <http://www.asimovs.com>), and be sure that you miss none of the great stuff we have coming up for you in the rest of the year!

COMING SOON

great new stories by **Larry Niven**, **Lucius Shepard**, **Kage Baker**, **R. Garcia y Robertson**, **Mike Resnick**, **Robert Reed**, **Lois Tilton**, **Tom Purdom**, **Brian Stableford**, and many others.

Stealth antenna hides under gutters but performs like big ugly antennas

The new Max Antenna by GE is the low-profile, high-gain way to get flawless reception of broadcast signals without expensive installation.

by Hope Chapman



The Max Antenna by GE is the ultimate TV antenna system.

Electronic engineers agree—your television is only as good as the signal it receives. Unfortunately, antenna design has not kept pace with improvements in television quality and the features available. Both cable and satellite television systems have spent a great deal to improve the quality of their transmission, but they can be extremely expensive, they aren't available in all areas and may not provide access to local TV stations. Luckily, there is a new antenna from GE that will provide breakthrough performance without making your family room look like something out of the fifties.

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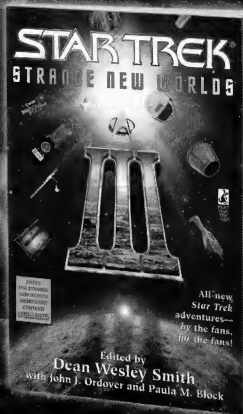


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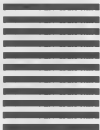
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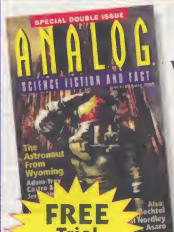
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